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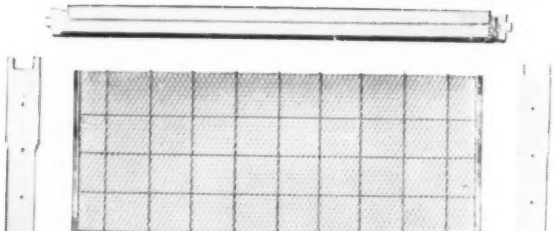

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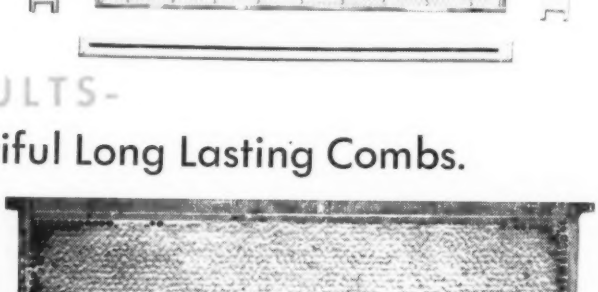

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Gleanings in Bee Culture

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COVER STORY — Our forefathers established a certain day during the fall of the year to commemorate and give thanks for their harvest. This day is known as Thanksgiving. The turkey is symbolic of this day and each American family looks forward to a big Thanksgiving dinner with roast turkey and all the trimmings. If you want to enhance the beauty and enrich the flavor of your turkey this year, glaze it with honey.

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Gleanings' Mail Box

JACK HAPP

Dear Editor:

I hope American beekeepers pay particular attention to the important article by A. S. Michael on page 492 of the current Gleanings, entitled "The Honeybee Act and the Acarine Problem". It has saddened me to see occasional letters in The European Bee Press from American beekeepers regretting the stringent regulations that forbade them to import foreign bee strains. I have felt that if as a result of an unfortunate importation, Acarine gained a foothold in the U.S.A., the bee industry there would suffer a blow from which it would take years to recover, if ever.

I have had a considerable experience with this disease, extending back almost 40 years, and with my late father, to the end of the last century. So it can be seen our combined experience embraces the whole history of Acarine infestation in this country. In the March, 1961 issue of BEE WORLD and as reprinted in THE IRISH BEEKEEPER of August, Dr. Bailey of The Rothamsted Experimental Station has implied that — "Contrary to popular belief there is no obvious resistance to infestation". Whilst not wishing to try conclusions with such an authority I would add that from my personal experience some strains are far more liable to infestation than others. This I have found to be particularly so from strains that have never been exposed to Acarine, such as those originating from the North American continent. This has not only been my experience, R. O. B. Manley, the noted British bee farmer, has mentioned the same thing in one of his books. Just after the last war I imported a large number of American queens from several famous breeders. I found the resulting colonies, both Italian and Caucasian, impossible to free from Acarine by any of our known methods of chemical treatment. The only way in which I could overcome the problem was by requeening with bees from my normal strain that had been exposed to Acarine over many generations. The doubtful advantage your breeders hope to gain by importing foreign strains is in my mind more than offset by the dreadful risk they are running. Every year I try strains from most European countries, even the Soviet Union, but I have yet to find a **better** bee than I already keep, though I have found some just as good. If your breeders wish to carry out experiments with new bees, why don't they try messing about with the black American bee? I have always felt this was the "poor relation" with you, but could be a pearl without price.

I sincerely hope Congressmen will realize the importance of Senator Ellender's bill, and American beekeepers the danger to their industry that Acarine would bring. — R. L. E., England.

Dear Editor:

I have just read your article in the September issue, page 515, criticizing the article by C. J. Koover in the June issue on "Safe Queen Introduction". I wish to report I have introduced 20 queens this past season without a single failure. Evidently you tried to place the queen cage flatwise between the two frames, while I placed the mailing cage between two frames edgewise, and had plenty of room without removing any of the frames. About five or six days later I removed the cork in the end of the cage by pulling a fine wire which I had attached, without opening the hive. A week later I removed some frames and found the queen laying. It is the best method I have ever used. — A. L. S., Ill.

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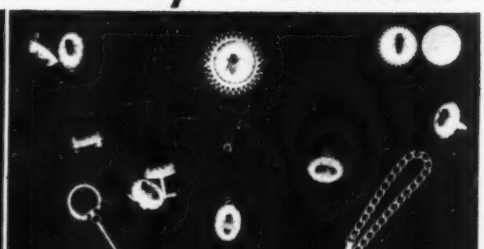

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Monthly HONEY Report

WALTER BARTH
Field Editor
San Antonio, Texas

IN A RECENT report in this column, mention was made about the increased consumption of sugars and syrups, and the thought was projected that increased honey consumption followed. This was in error. The correction came from Millard Coggshall, an outstanding honey producer who has devoted years to solving industry marketing problems. His important comments are to be presented here.

YEAR	U.S. POPULATION
1945	129.1 million
1950	150.2 million
1955	162.3 million
1959	174.4 million

This data points out the need for increased promotion of honey on a national scale. Obviously we are losing out in the marketing fight with competitive products. These same figures, shown here, give hope, however. While honey production has not shown any tremendous increase, our potential customers are increasing at a rapid rate.

The means to accomplish increased honey promotion on a national scale could be the voluntary "Check-off Plan" adopted by the industry. To raise the necessary money by this means will require a greater participation by producers and packers than in the past.

The alternative could be a mandatory tax on honey under a government marketing order. The discussion of these two concepts will undoubtedly be an important issue at the coming national meeting in January at Biloxi.

Honey consumption has been on the decline while other syrups have shown a steady increase. This data was brought to industry attention at the Tampa national meeting, according to beekeeper Coggshall. The data was presented by Paul Smith of the Poultry and Honey Section, Agricultural Estimates Division, Agricultural Marketing Service of the U. S. Department of Agriculture.

"In the period 1940 through 1956, per capita sugar consumption increased one percent, corn syrup, 14 percent, while **honey consumption decreased**

TOTAL HONEY CONSUMED IN U.S.	PER CAPITA CONSUMPTION
256 million	1.99
235 million	1.56
242 million	1.49
239 million	1.37

about 25 percent." Here are some statistics:

Beekeeping Conditions

Bees are reported to be in fair condition throughout the Southern States. In Louisiana bees are sliding backwards and it is possible that some colonies will be short of winter stores so that feeding may be necessary. Alabama received a little too much rain this summer for bees to be at their best. Honey plants are in good shape. Virginia reports its honey plants and bees are in good condition. The honey market is sluggish in the South with retail prices slightly below the national average.

Going west to Texas we get a report of a light orange crop that sold quick-

(Continued on page 700)

MR. BEEKEEPER:

Do you want better prices for your honey?

The best way to get that better price is to increase the demand for honey through promotion and research. All this costs money. The best and fairest way to raise the necessary funds is to have the honey producer and the honey packer each contribute equally to the program. The best way to accomplish this is by the **CHECK-OFF PLAN.**

Most honey packers and dealers participate in the Check-Off Plan. When you sell your honey insist that the buyer provide you with "Producer Stamps" and "Dealer Stamps". This is your receipt for your contribution at the rate of 2¢ per 60 pound can and evidence that the buyer has paid an equal amount. Thus, 4¢ per 60 pound can will be raised and those little cents soon add up to powerful dollars which the Honey Industry Council will put to work where they will do the most good.

Your honey must compete for store shelf space with 6,000 other food items, most of them well advertised. If you really want better prices for your honey you can help get them by insisting that your buyer use the Check-Off Plan. **You** as a honey producer must do this if **you** want better prices.

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Wendell Shore, Chairman

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ALBERT S. DAVIS
Asheboro, N. C.

BIG GAME hunting is practically a thing of the past for the outdoor man now but he has one unrestricted sport still open to him — bee hunting — no closed season, either, so long as the bees fly. All he needs are stout legs, good eyesight and a sensible knowledge of old-time rules about bee hunting.

We hear of a Los Angeles policeman who spends his annual vacation hunting bees in Northern California. He doesn't even cut the trees he finds. It's just a satisfying pursuit to him, requiring only travel to some wild and promising area.

At 68 I'm still keen about the sport, which I took up at 10. I've found bees in half the states, as far west as Oregon, also in Canada and Mexico. I've found them in rocks, houses of all kinds, chimneys, wells, stumps and trees, brier thickets and holes in the ground, but never, strange as it seems, in a dead tree.

My early home area near Mt. Kearsarge in New Hampshire was good hunting country. A neighbor once asked me to find a swarm of Golden Italians he had lost. All who tried to find them had failed, he said. The bees were somewhere on the south side of the mountain but they seemed to disappear into thin air.

On a bright September morn after the chores were done I went out with bait box and syrup bottle and climbed halfway up the mountain to find a goldenrod clearing. Blacks were there and finally one of the goldens. I captured it by snapping the box cover on the bloom. The hinged lid was glassed and after it was covered with the square of black iron the bee soon quieted and began working the comb fitted into the bottom of the wooden box. I opened it and waited with my back to the sun for the bee to take off. She flew over me into the sun and returned in about six minutes, meaning that the nest was nearly a mile away.

Rather than to wait idly I walked to the nearest stream, cut a pole and caught me a mess of brook trout which I wrapped in wet moss and cached in a cool place, returning almost two hours later to the bait box. It was swarming with bees. They were taking off along the mountainside toward a low ridge. I sighted a dead tree there, closed the lid with bees inside and made for the tree.

After rough going through blowdowns, rocks, and spruce thickets I reached the tree, set the box well up on the trunk, opened it and watched. The bees went toward a big ledge above the valley, flying down the 50-foot face of the ledge. Leaving the box on the ledge I scrambled around to the slope below. Seemed to be bees everywhere but no likely bee tree nearby. It was getting late and I was stumped when I noticed a golden bee crawling into some dead leaves on the ground. Others lit there and disappeared. Under the leaves was an inch-wide crack in a rock, and 20 years later the bees were still there.

I took the box, found the trout and made a beeline for home.

Chasing bees is certainly a workout. I have found a swarm in 15 minutes and have taken five days to find one. I have found as many as eight in one day. I've followed bees all day and found them in somebody's beehive. They don't always fly in a straight line, either; they may go around a hill or up a valley to avoid a wind. You have to consider such circumstances. No, it's not an easy sport but it sure puts you in shape.

Of course everyone has his own arrangement for hunting bees. Mine is a box three inches square and two deep with a saw groove in three sides and cut through the fourth side, permitting an iron plate to be pushed in just above the square of comb fitted into the box bottom. The lid is a glassed frame,

A goldenrod clearing makes a fine place to start.

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hinged to one edge. Open the lid, catch the bee, close, remove the black plate and cover the lid with it. The bee will then go to the comb, after which you then set the box down, open the lid and watch. When the bees are working well, trap some, move along the line of flight and repeat. When you have gone too far move to one side to get a cross line. The swarm will be at the intersection of the lines.

Here are other suggestions that may help:

Bees can be lined from where they are taking water, in which case the nest may be only two or three hundred yards away. If you can't operate from there, place an inverted water glass over the bee and she will fly up against the bottom. Set the glass on the cover which you have fixed with waxed liner or a leaf and a few drops of honey. Now set over the inverted glass a sheath of black paper prepared to show light at the cover. Move to a favorable spot, set glass down carefully and lift off from cover with the bee still feeding. Make a bouquet of twigs and leaves, sprinkle with heavy sugar water from a small bottle you have brought and place near the cover. Later, with bees working the syrup, you can move your bouquet along the line as you would a bait box.

Bees may be drawn to the bait by essential oil scents. I prefer oil of anise and a half ounce lasts me a long time. In an interesting area you fix a **safe** spot for a fire as big as your fist and over it heat a lard pail containing honeyed pieces of comb. Shake up three drops of oil of anise in the bottle of syrup and sprinkle a bouquet of twigs. Pour some in the pail and lay the bouquet across the top. The fumes drift far and wide and with bees on the twigs you are in business. **And put that fire OUT!** If no bees come within half an hour there are none in the area.

In dry regions like the mesa country of Arizona all you need is water for bait. Just a word of caution, though — the bees are in rocks and holes, so look out for rattlers.

All right, you have found your bee-tree. Mark it by the well known method, with name and date, and nobody else will take it. Your procedures for dealing with the owner of the property have been in effect for centuries. There is no need to repeat. If you want honey, the best time for that is just after the first September freeze; if bees, take in apple blossom time.

To save the bees you use the good old saw-and-ax method to open the nest. I use a light box holding five frames. I spread a white cloth under the entrance, quiet the bees with smoke and shake or brush them off the combs onto the cloth, keeping watch for the queen. If she enters the box they will all follow. On a light board I cut and fit the brood combs into the frames, up edge up. The five frames are enough for the worker brood. Light jute twine is good for tying in and the bees can remove the ties in a few days but I use six rubber bands — four the short way and two the long way.

The honey is put in covered containers which you carry home. Leave the hive there for a couple of days to get organized. I go again at nightfall or early morning, screen in and carry home to where I have a standard hive ready for the bees. With the sun out good I transfer the brood, removing the rubber bands, and fill out the hive with wired and waxed frames. Everything is then "hunky dory".

"HOW ABOUT ANOTHER JAR OF HONEY? THERE'S A TWO PERCENT DISCOUNT TO TRUCKERS!"

One of the recipes in the book, "Honey Recipes from Texas*", tells how to make honey and peanut butter cookies. These books can be used for door prizes, special awards and gifts. The book was assembled and published by the Ladies' Auxiliary of the Texas Beekeepers' Assn.

Booklets Can Sell More Honey

This method of advertising must be good, national food companies spend millions to promote their products this way.

A. B. KENNERLY
College Station, Texas

* The Texas recipe book is available from Mrs. James T. Davis, Jr., Box 373, Navasota, Texas, in case anyone is interested.

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SEVERAL restaurants in Texas, specializing in fried chicken, have a handy pitcher of honey on the tables for guests to eat with hot rolls. Many people are introduced to the goodness of honey by this means for the first time. But what about the millions who never have the opportunity at a public eating place to be introduced to honey? You can remind these people that honey is good through booklets. There are enough booklets of different kinds available to tell the honey story to any and all audiences — including your audience. If you are a honey producer, it's your responsibility to help sell your product.

"I ordered several hundred of those booklets at one time," a honey producer once told me, "and they're still stacked about the house somewhere. I could never find a way to use them. I don't believe they do any good."

He was right to a certain point. The booklets won't do any good if they are left in a stack in a honey house. There are too many good uses for booklets to keep them hidden away.

Booklets available to beekeepers in quantity today can be divided into three groups: recipe booklets in which honey is one of the ingredients; booklets and folders suggesting honey in combination with other foods such as pancakes, muffins, cereals or fruits; and booklets telling about the value of honey as a food or interesting facts about bees.

One beekeeper who uses several different kinds of recipe booklets orders his supplies well in advance of the season. "Early in the year, I order recipe books for preserves, jellies and marmalades," he informed me. "When the fruit season comes, I get permission to place a folder in each bushel and half-bushel container of fruit, then leave a few at the cash register to go into sacked fruits. These merchants usually sell honey and are happy to cooperate for the extra sales."

Summertime is picnic time, so this beekeeper orders plenty of booklets with recipes for snacks. He arranges to give these away where picnic supplies are sold. Then comes the Thanksgiving and Christmas season when honey recipes for various kinds of cakes suggest to the housewives that honey tastes good in cake too.

Another beekeeper living in a medium size town has access to a list of dates of children's birthdays. How surprised and pleased is the mother when she receives through the mail a few days before her child's birthday a folder from this beekeeper suggesting a recipe for a birthday cake!

The problem of distributing the booklets where they will do the most good is a difficult one. Booklets are too costly to hand out as you would handbills. These booklets must result in a reasonable volume of sales to pay off for the beekeeper. They can be helpful if beekeepers are alert to opportunities.

One beekeeper, for example, checks the daily newspaper for births of new babies. He sends the proud parents a congratulatory note and encloses a booklet on the use of honey in infant feeding. Will daddy and mother eat some of the honey, too? He thinks they will.

Honey in combination with other foods is good, and this suggests other ways to distribute booklets. One beekeeper bought a mall supply of rubber bands and received permission from the food store merchant where he sold his honey to attach a booklet to each box of cereal on the shelves. The booklet, of course, told ways to use honey with different cereals. This same idea could be used with pancake mixes, muffin mixes and canned biscuits. Cake recipes calling for honey would be ideal to attach to boxes and small sacks of flour.

By all means, attach different kinds of booklets and folders to the jars of honey that are sold.

Booklets and folders telling of the value of honey for health and energy can often get free rides through the mails. One beekeeper induced his banker one month to include a honey leaflet with each bank statement which he mails to the bank's depositors. This leaflet described honey as a multi-purpose food. Other opportunities are offered by your friends who send out monthly bills. A jar or two of honey would help to sweeten the idea for them.

(Continued on page 701)

A colony of bees ready for winter with 60 pounds of honey, three full frames of brood, a young queen, and probably 10 pounds of bees. Note at front of hive telescoping lid sets on the top edge of Ten-Test inner cover. At rear, the cover telescopes over the Ten-Test inner cover leaving a wedge shaped space for air circulation between inner cover and top. This removes excessive moisture absorbed by the Ten-Test. —(Alberta Gov. Photo.)

Wintering Bees in Alberta

"A beekeeper must consider all methods of wintering in order to insure himself not only a high percentage of survival of winter colonies, but also a population sufficiently strong that the colonies may be split in the spring."

J. W. EDMUNDS
Edmonton, Alberta, Canada

A GOOD DEAL of controversy exists among beekeepers with regard to the advisability of wintering bees in Alberta. For the benefit of the readers who do not appreciate winter weather conditions in Alberta, we will briefly sum-

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marize what we normally expect to happen, weather-wise, during the fall, winter, and early spring.

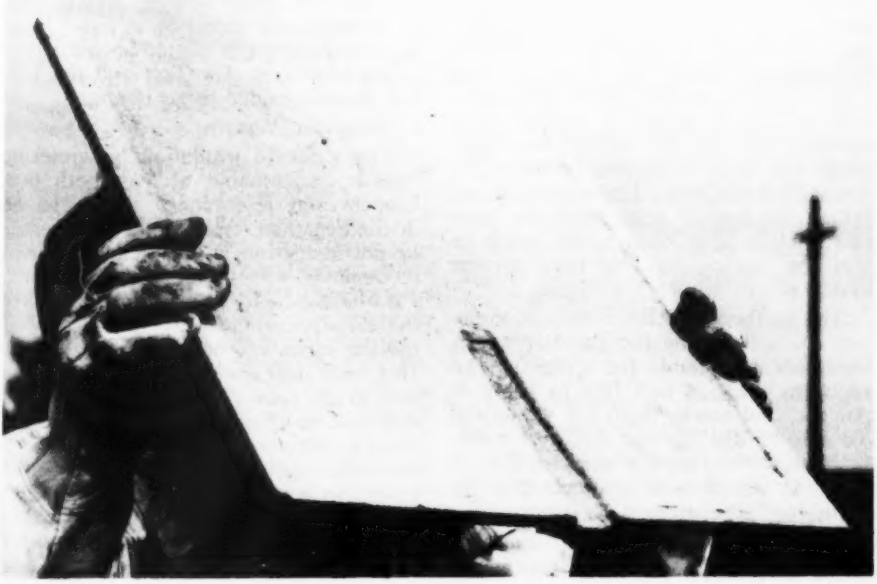
Our first killing frosts usually occur about the first week in September. This means that the honey flow has ended and from the first of September until the first of May the bees are dependent for food on the stores they accumulated during the summer. They must eat from their stores for eight months. September and October can be relatively good months so far as temperature is concerned but since killing frosts have occurred, no nectar is available for the bees. During November, December, January and February, we can anticipate periods during these months when the bees will have no flying days for stretches of two to three weeks and may even be confined for a month or more without any flights. March and April usually have a fair number of flying days. About the end of April willow begins to bloom and the bees will collect some nectar and pollen, usually not a surplus but sufficient for their own maintenance.

The controversy as to whether bees should be wintered or not usually revolves around the economics of the practice: whether or not a wintered colony will produce sufficiently more honey than a package colony to offset their requirements for wintering. It is a foregone conclusion that they will consume honey of greater value than the cost of a two pound package of bees. However, this argument is not as simple as it would appear on the surface, because any good beekeeper knows that a colony in this area that has wintered well must be split or divided sometime during the spring. The beekeeper must consider all methods of wintering in order to insure himself of not only a high percentage of survival of wintered colonies, but also a population sufficiently strong that the colonies may be split in the spring.

I am of the opinion that it is not impossible to achieve at least an 80% survival over a period of years, and with proper methods, 80% of the surviving colonies can be brought through sufficiently strong to be split at least once.

We are inclined to forget that in the history of our province, the use of package bees is a relatively recent innovation. The table following this article, taken from an address by Mr.

Ten-Test inner cover cut to the size of outside dimensions of a hive. Note dado saw cut for top entrance. — (Alberta Government Photo.)



Colony packed and wrapped for winter. Note tarpaper comes only to top super, no overlays over top. Also entrance reducer groove for entrance is upwards so cold winds cannot blow into colony. Convenient for moving as all openings on reducers are the same size and small blocks can be dropped into the groove requiring no nailing.

H. T. Luther of the Lethbridge Experimental Farm, to the Alberta Beekeepers' Association Convention, is somewhat of an eye-opener. Please take special note of the years in which these tests were conducted. Wintering bees successfully was a matter of life and death, or perhaps I should say, remaining a beekeeper or looking for another occupation, at that time. Package bees were probably talked about by some, and an absurd dream of others. The method used by Mr. Luther has been used, with some variations, by Mr. C. J. Read of Red Deer. Unfortunately, so far as the test is concerned, the past two winters have been rather mild, so that the method has not been proven under severe winter conditions.

The method Mr. Read uses is to select colonies during the summer which he considers suitable for wintering; he requeens them in late July or early in August, and marks them for wintering. To date he has not had sufficient nerve or time, or perhaps a combination of both, to winter a large percentage of his outfit. The method he used during the winter of 1960-61 on 125 colonies, proved to be sufficiently encouraging, that he intends to winter a higher percentage this fall.

I believe the significant factors in Mr. Read's success to be:

1. Tarpaper wrap which does not fold over the top of the colony.
2. Ten-Test inner cover which also provides top entrance.
3. Telescoping top placed so air circulates between Ten-Test and the top.

Let us consider these items:

1. **Tarpaper Wrap**

The value of insulation in wintering bees is questionable, at least both beekeepers and researchers appear to be divided in their opinions as to whether or not insulation is beneficial. Perhaps it depends on the area and climate. I do believe it to be significant to have the tarpaper come only to the top of the top super and not fold over the top. If it folds over the top it traps the moisture in the colony and doesn't allow the moisture to evaporate. Several of Mr. Read's colonies had the tarpaper folded over the top of the Ten-Test inner cover; in every instance, the Ten-Test inner cover would be soaking wet. In those colonies which had the tarpaper flush with the edge of the super the

Wrapping in Paper vs. Packing in Cases for Wintering
By H. T. Luther

Several winter conditions		Packed 1-colony cases	Packed 2-colony cases	Packed 4-colony cases	Wrapped singly in paper
1926-27	Pounds stores consumed	40	35	30	35
Open and mild	Percent winter losses	33.3	31.2	6.2	Nil
1927-28	Pounds stores consumed	40	37	35	30
Long and cold	Percent winter losses	50	33.3	16.8	30
1928-29	Pounds stores consumed	38	36	30	32
Long, cold and stormy	Percent winter losses	50	33.3	16.8	Nil
1929-30	Pounds stores consumed	32	32	26	30
Stormy, severe and late	Percent winter losses	16.7	8.3	Nil	6.2
1930-31	Pounds stores consumed	35	34	31	33
Early, open and long	Percent winter losses	25	8.3	10	6.2
1931-32	Pounds stores consumed	32	34	36	33
Long, severe, stormy	Percent winter losses	25	Nil	12.5	9.6
6-year averages	Pounds stores consumed	36	35	31	32
	Percent winter losses	33.3	19.1	10.4	8.7
During 15 years use of the above methods the following figures were accumulated:					
No. of colonies used		118	146	312	229
No. of colonies alive and strong in the spring		70.34%	77.4%	95.84%	90.4%
Initial cost of protection and cases when test began		$3.65	$5.20	$8.65	20¢

inner cover remained dry throughout the winter.

2. **Ten-Test Inner Cover**

Ten-Test absorbs moisture readily. It should not be the tar impregnated type. It also provides a simple method of providing a top entrance. A dado cut is very easy to achieve in this material and it provides an excellent entrance. The bees tend to chew it somewhat, but it would appear they should be good for several years if carefully stored when not in use.

3. **Telescoping Top**

The telescoping top is placed so that the lower edge of top rim rests on the Ten-Test inner cover. This keeps rain and snow off inner cover, but allows circulation of air between the top and inner cover. This removes the moisture absorbed from the colony by the Ten-Test. It may be this works well in Alberta because of the very low relative humidity which is normal here during the winter.

This procedure is by no means the only one which is successful; any beekeeper who has devised a system which works well, should continue with it. Those who are experiencing difficulties in their present methods, would perhaps do well to give this method a try.

Ideas

WINSTON W. LUNDY
Laurel Hill, Fla.

WE FIND an old discarded washing machine just fine for mixing water with sugar for sugar syrup to use for winter feeding. Perhaps some of your other readers have washing machines no longer in use that can be used for this purpose.

A. E. LAMPING
Pittsburg, Pa.

IF YOU WANT a real good wintering cover for your hives, use transparent plastic sheeting: windproof, rainproof and the bees get lots of warm sunshine. This is the best for me.

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Migratory Beekeeping-- an ancient practice

Beekeepers since the dawn of civilization were, just as today, an enterprising and resourceful lot. Hard work, close attention to detail and alertness were then, as now, the tools of success.

ROBERT J. WYNDHAM
Upland, California

TO MAKE a living, migratory beekeeping is necessary for many beekeepers. Loading the hives on the truck, then unloading them takes a strong back, even if you are lucky enough to have a loader mounted on your truck. But imagine how tough a job it would be if you couldn't put the hives on wheels!

Yet beekeepers have migrated with their hives since the dawn of civilization and possibly earlier than that. For it seems safe to assume that the first migratory beekeepers were nomads. While they were roaming with their cattle to provide them with pasture the year around, they took their hives with them. Even a nomad didn't want to be without honey. Far into modern times nomadic Armenians roaming the steppes in Southern Russia hauled their hives on camel back. Sometimes as many as a thousand hives could be seen in one location.

Toward the end of the 19th century, it was reported that the owners of 350 colonies in Palestine (now Israel) harvested 26,000 pounds of honey. "Some 12,000 of this were furnished in April by the orange groves of Jaffa and the wild thyme on the hills about Bethlehem gave the remainder during July." The beekeepers moved their bees on camel back, 16 in a load. The men and camels rested during daytime and at night "they fold their tents like the Arabs and silently steal away." Twenty camels with their loads filing over the moonlit hills of Judea must have been quite a sight!

The beekeepers of La Beauce, France for centuries loaded their bees on carts in August when the blossoms in their area wilted. They carted them about 10 miles to the buckwheat, vetch and heather. They traveled at night at a slow pace, 30 to 40 hives loaded on each cart. The beekeepers called this appropriately "leading the bees to pasture". Sometimes they had to move them several times in one season. The same pattern is followed in Scotland. When the honey flow in the Scottish Lowlands is over, the bees are hauled on carts to the Highlands to obtain the highly prized heather honey.

In Ancient Greece migratory beekeeping was as old as the hills, for Solon (639-559 B.C.), the famous legislator, ordered that bees could not be located within 300 feet from another beeyard. Beekeepers from the northwest of the Peleponesus and other areas moved their bees to Mount Hymettus to get a crop of its world famous thyme honey. Pliny the Elder (23-79 A.D.) tells us that the Spaniards of his day used mules to move their bees. The

Ancient Egyptian beekeepers at work.
◀From a tomb, 610B.C.

same practice was reported from Spain far into the Middle Ages.

It feels good to read that beekeepers in antiquity were just as resourceful as they are in our day. Water-borne transport has always been the most economical and requiring the least effort. Again Pliny relates that the beekeepers of a village called Hostilia on the banks of the River Padus (now named Po) in Italy loaded their hives on boats as soon as the honey flow was over in their vicinity. Then at night they sailed up the river to good bee pasture, where they simply moored their boats. They changed their location as necessary by following the course of the river. As the bees gathered the crop the boats sank deeper into the water. The waterline told the men when to return to their village to take off the honey. This method was still followed in modern times. Then, by reading a scale attached to the boats, the beekeepers-boatsmen could tell accurately when it was time to go home.

Columella, a Roman writer of the first century A.D., reports that the Greeks moved their bees from island to island. This method was still used by modern Greeks living on the coast of Asia Minor. They sailed their ships loaded with hives from the mainland to the islands of the Greek Archipelago. Columella also mentions that the Greeks even shipped their bees all the way to Egypt to take advantage of the difference in seasons. A rather amusing accident happened on one of these trips. A hive on one of the boats toppled over and the bees furiously attacked the sailors. Fortunately the incident took place close to shore. So the sailors in their despair jumped overboard and swam to shore. Later they returned armed with smoking equipment.

Beekeeping and its products played a major role in almost every phase of life in Ancient Egypt. It is significant that their first king, Menes (about 4,500 B.C.) was called "the Beekeeper". Far into the mists of time the beekeepers livng near the Nile Delta were aware of the fact that plants and trees along the long course of that river bloomed several months earlier upstream. So in October they loaded their hives on rafts and barges. Then boatsmen sailed the vessels up the Nile to arrive in Upper Egypt by the time the blossoms were about to open. There, without unloading the hives, they moored the vessels. Every time the honey flow gave out they just let their boats drift downstream, stopping at all places where the pasture looked promising. In this way they followed the blossoming of the plants along the banks as the annual floods receded. In February the fleet was back home at the Nile Delta. Then the carefully numbered hives, now heavy with honey, were returned to their owners and the boatsmen received their fee.

This efficient method of beekeeping was practiced through the centuries and it persisted to the 20th century. In the 1800's a traveler reported having seen a fleet loaded with four thousand hives working its way down the Nile. For centuries Egypt exported sizable amounts of honey, so this method was evidently profitable. And then, who wouldn't have liked to make such a romantic trip on the Nile?

In the 19th century an enterprising Chicago firm took a leaf from the book of the Ancients. On a large scale they experimented with water-borne beekeeping on the Mississippi. Starting out from New Orleans they followed the season to St. Paul obtaining mainly river willow honey. In September they started the trip home. However, this venture turned out a fiasco probably due to lack of know how of practical beekeeping on the part of the managers.

In Upper Egypt bees are moved on camels and donkeys. And this practice also goes back far into antiquity, for papyrus scrolls dating from the third century B.C. were discovered in which migratory beekeepers petitioned an official. He had requisitioned their donkeys and the beekeepers petitioned to send the animals back as they needed them to carry their bees home. "Unless the donkeys are sent at once, the result will be that the hives will be ruined. . . . Already the peasants are warning us, saying "We are going to release the water and burn the brushwood, so unless you remove your bees you will lose them' ". Yes, worries are always familiar to beekeepers, now as well as thousands of years ago.

(Continued on page 697)

Beeswax Contents of Old Comb and Wax Moth Excreta

FRANCES L. BONNER, Assoc. Prof.
Louisiana Agricultural Exp. Station
Louisiana State University
Baton Rouge, La.

THE GREATER wax moth, (**Galleria mellonella L.**) has a world-wide distribution. It is a serious pest in the southern states where it destroys an unknown number of honeycombs every year. Most colonies probably contain some stage of the insect. Winter temperatures in the South generally are not low enough to kill the various stages of the wax moth but may slow its development.

Beekeepers generally believe that the wax moth larvae live only on honeycombs, but Haydak (1) has shown that beeswax is not needed in the diet. A number of chemical determinations were made on bee combs and wax moth excreta in order to learn the relation between the wax in the comb and in the excreta.

One sample of new honeycomb, six samples of old honeycomb and four samples of wax moth excreta were collected from different hives. Sections of honeycomb weighing from one to three grams were wrapped in filter paper and extracted with ethyl ether for 16 hours. After evaporating the ether, extracts were dried at 100°C. overnight to constant weight. Excreta samples were weighted and analyzed in the same manner. At least three replicate determinations were made on each sample.

New honeycomb contained an average of 97.7% beeswax with a maximum variation between replicates of 2.2%. Averages for the six samples of old honeycomb were 52.6%, 57.6%, 61.3%, 67.5%, 74.3% and 76.8% with differences between replicates as large as 16.1%. The beeswax contents of wax moth excreta samples were 50.1%, 54.3%, 69.3% and 71.3% with a maximum variation between replicate determinations of 3.2%. These results indicate that the moth larvae may use a small part of the wax in the comb, passing most of it in the excreta.

The use of small sample weights for the determination of a major ingredient accounts for the variation (2.2%) of the replicate analyses of the new honeycomb. Since excreta have passed through the digestive tract of the wax moth larvae, the samples are relatively homogeneous and variations between replicates are only slightly more than that of the new honeycombs. The large variation between replicates of old honeycomb must therefore be attributed to the composition of the samples. Examination of the residue remaining on the filter paper after extraction revealed a mass of cocoons and other ether insoluble materials (perhaps propolis, pollen, etc.) which might be expected to vary in quantity with the number of broods raised in the comb. Visual observation has indicated that certain areas are used more often for raising brood. Thus, variations between replicate determinations of beeswax in old honeycomb of more than 3% may re-

(Continued on page 698)

Beekeeping On Prince Edward Island

"Colony yields average from 60 pounds in a poor year to slightly over 100 pounds in a good year."

DAVID MacLEAN
Provincial Apiarist
Charlottestown, P. E. I., Canada

BEEKEEPING in Prince Edward Island dates back to the time of the early settlers who brought bees with them. Beekeeping was general throughout the Island with the bees being kept in old-fashioned cone hives, later changed to box hives. The box hive had a door opening in one side so that the beekeeper could see the bees through a glass. Sections were placed in an upper chamber in order to secure comb honey. Holes were drilled in the top of the brood chamber so that the bees could travel up and down from the brood chamber to the honey chamber. Most of the honey was secured by smoking the bees out in the autumn.

Common Black bees were the variety kept for many years. They were hardy and not difficult to handle by the methods then used. This black strain was later replaced with the Italian strain, due mostly to its resistance to disease, and although Italian bees are the ones kept now, a number of other strains have been tried with varying success.

Increases were always made by natural swarming, which was a great event. Everyone turned out; tin pans, and anything that would make a noise, were used to induce the bees to alight.

Many swarms did not alight, but were the property of the owner as long as he could keep up with them. Once abandoned the swarm became the property of the one who found it. Bee trees were fairly common and were greatly prized by the bee hunter.

Today nearly all of the bees kept are Italian, and are brought in the spring from Florida. Due to our moist climate making wintering uncertain, and the fact that the beekeeper does not have to pay the freight, it is cheaper to gas

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them off in the fall, and extract the honey which would be needed for winter feed.

The first experimental work on bees was done at the local experimental farm in 1913, and has been carried on there ever since. The first census to determine the bee population was taken in 1915, at which time 45 beekeepers were located. In 1916, 168 colonies produced a surplus of 6,540 pounds of honey.

During the spring of 1960, 889 two pound packages containing mated, marked and clipped queens were imported and distributed to 89 beekeepers. This is below the average number of 940 colonies and 104 beekeepers, the largest number going to one apiary being 300. Colony yields average from 60 pounds in a poor year to slightly over 100 pounds in a good year. Most of the honey produced is either eaten at home or sold locally, with a small percentage of the crop being exported. For the honey sold, the beekeeper received an average of twenty (20) cents per pound.

To date there are no large commercial beekeeping enterprises on the Island, although if a market could be found the Provice could handle many more colonies, as about one million and a quarter acres are under cultivation. From three to four hundred thousand acres are under pasture. Because of our ideal climate and rainfall, clovers grow very well, thus making for a good bee pasture. A considerable amount of fall honey is secured from aster and goldenrod, both of which grow abundantly on waste land.

(Continued on page 701)

Newspapers are vitally interested in front page news.

Free!

Advertising for the Beekeeper

EMORY WARD
New York 22, N. Y.

EVERY BEEKEEPER certainly knows that it pays to advertise. But too many beekeepers seem to be under the impression that **all** advertising is expensive.

What most honey producers fail to realize is that there is **one** kind of TV and newspaper advertising that is absolutely **free.**

This free advertising is known as "publicity". It is so effective that it is eagerly sought after by some of the country's biggest companies. Yet in spite of its value, your own local newspaper, radio or television station will be glad to give **you** this advertising free of charge.

For the beekeeper, the right kind of publicity has a double effectiveness. First, even the smallest publicity story helps stimulate the sale of honey **generally.** It reminds readers that honey is Nature's own sweet, and in so doing it successfully creates an increased overall demand for honey.

At the same time, a publicity story can publicize your own brand of honey or your apiary. It creates more sales and more profits for you personally. Thus, it helps the industry as a whole, and you in particular.

As you know, newspapers are vitally interested in front page news. But they are also interested in special feature material ad local stories. They are interested in all kinds of stories or photographs about unusual local events and unusual local activities.

Fortunately, beekeepng is filled with these unusual events. In fact, the beekeeper himself is an endless source of interesting stories and articles. Your everyday beekeeping activities can prove to be a gold mine of valuable feature material that will not only prove interesting to the newspaper readers, but will help whet their appetite for honey as well.

However, it's up to **you** to make sure that the newspapers know about it.

Here, for example, are just a handful of the many ideas in which your local newspaper might be interested:

. . . .a swarm of bees captured in a highly unusual place such as on a traffic light; clustered around a highway "stop" sign; or any other humorous or unusual spot.

. . . .an unusually strong colony that has produced a record honey crop, whether during the full season or during the height of some special honey flow.

....the first swarm you catch in the spring, along with your explanation as to why "a swarm in May is worth a load of hay".

....a story at the season's end, with photographs of well supered colonies, and your prediction of an unusually good honey crop.

....a story, with photographs, of how bees are fed. Readers will be surprised to learn that "bees need feeding, too".

....if you have youngsters who work bees, by all means get a photograph of them handling the bee-covered frames or supers.

Dozens of other ideas will be eagerly accepted by your local paper.

If you are lucky enough to have a member of your family, or an associate, who is especially handy with a camera, press him into service. On-the-spot photographs are not necessary, but they definitely add to the interest and the value of a story.

Give the photographs, or telephone the essential facts, to the city editor or the feature editor. And be sure, of course, that he gets your name and address, the location and name of your apiary, and the brand name of your honey. This is the information that will pay off for you.

If you are unable to obtain photographs, don't pass up the opportunity. Just telephone the city editor or the feature editor and explain what the story is. If he thinks he can use the idea he'll gladly send out a regular photographer to get the picture and the facts.

If the story has unusual action or interest to it — something that can be interestingly picturized — don't forget to include your local television station. If the story is worthwhile they'll send out a cameraman and use the films as a human interest shot on some of their local news shows.

If your local paper has a Sunday feature section, check with the Sunday feature editor. He may be interested in doing a full feature story about you and your apiary as "The Sweetest Place In ..... County".

It is unfortunate that beekeepers are not more aware of the value of these special publicity stories. The business

Call the editor and if he is interested

of beekeeping is a fascinating business and its daily activities can yield scores of wonderful story ideas. It's simply a matter of keeping your eyes open and recognizing their value.

Remember, as we mentioned earlier, these publicity stories have an important two-fold advantage. First, they help beekeepers everywhere. They create a greater interest, a greater desire, and a greater demand for honey in general. And at the same time these publicity stories actively stimulate demand for your **own** brand of honey. They help **you** make more sales and more profits.

He will send a photographer.

HENRY HANSEN
President, ABF

The Enabling A

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R

THERE HAS BEEN a lot of confusion about what can and what cannot be done under new legislation for our industry. For those of you who have not kept up with the developments on this controversial subject, a brief review may be in order.

At our last convention in Omaha, Resolution 1 requested an exploration of the possibilities of obtaining special legislation so that mandatory funds could be raised from our industry for promotion and research.

When honey was included in the Omnibus Farm Bill it was a surprise to the Federation as we had done nothing to have it included. As authorized under Resolution 1 we began to explore the possibilities of achieving our goals under the new farm bill, and what we learned was good; however, honey was removed from the farm bill. We wanted to know why, and found that a well planned campaign had successfully had it deleted. We have been successful in having legislation introduced to reinstate honey, but no action will be taken on this until Congress reconvenes in January. The House bill is HR 8680 or HR 8684 (similar bills introduced by two different Representatives) and the Senate bill is S 2472.

Under the farm bill, our industry would have an industry board made up of beekeepers and packers who would collect compulsory check-off funds. None of these funds could be spent without the approval of our board. These funds would be spent for promotion and research. (This information was received from the office of the Secretary of Agriculture). While the responsibility for collection of funds would be with our industry board, enforcement of violations would NOT be the burden of the board. That would be handled by government law enforcement.

Since our exploration of the possibilities of this bill revealed that it could be tailored to meet our needs (and this exploration was authorized under Resolution 1), and since the law would not become effective without the affirmative vote of two-thirds of the beekeepers, we felt that it should be presented to the beekeepers at our Biloxi convention and they should have a chance to vote on whether such a national referendum vote (to secure two-thirds majority) should be taken. This nation-wide referendum would be taken at no expense to our industry.

The Federation is not trying to force anything upon the industry and since we are not politicians we moved slowly and it must be admitted, awkwardly, in this field of politics. However, from what we have learned by direct communication with the office of the Secretary of Agriculture, the new farm bill is flexible enough to permit special legislation to cover the exact needs of the industries included. The Secretary's office assured us that:

1. We could collect mandatory funds for promotion and

(Continued on page 702)

ng Act

GLENN GIBSON
Past President, ABF

AGAINST

IT IS WITH GREAT pleasure that I have been allowed by Gleanings to speak out in behalf of the independent honey people of America, in opposition to the minority within our industry who want to place honey under marketing orders. Gleanings is approaching this industry problem openly, and with a sincere desire to present the facts. It is with this in mind that I carefully set down the following reasons why marketing orders would be an extreme detriment to the independent producers and packers who make up the large majority of our industry, and the reasons why marketing orders would place a preponderance of power in the hands of the cooperatives, who make up a small minority. The following concessions that cooperatives would receive under marketing orders, I think, are the most important facts that need evaluation. These favoritisms are so appalling that any independent producer or packer will see immediately that, for him, this industry problem is a question of survival.

The first favoritism is that cooperatives can vote their entire membership in one block — this means that in any voting to determine whether or not there will be a marketing order in a given district, state, or region, a cooperative can cast the vote of its entire membership in that area, if they have only one member residing there. In the honey industry one cooperative has a widely scattered membership. It would be in a position to completely overwhelm the independent producers in any given area of the United States (U. S. vs. Rock Royal Co-op (307 U. S. 533)).

The second favoritism is that these same voting privileges would carry over in the creation of advisory control boards, which under marketing orders, work directly with the Secretary of Agriculture to administer, to delegate, and to control. In the honey industry one cooperative, marketing approximately 12 percent of the national honey crop, could dictate policy for the entire industry.

The third favoritism is best outlined in a letter written by Emanuel Cellar, chairman of the committee of the Anti-Trust and Monopoly Sub-Committee of the House of Representatives. In a letter to Harold Cooley on July 14, 1961, in reference to the Omnibus Farm Bill, he says, "For example, the section (401B; which was passed) would sanction conspiracies between farm cooperatives to fix prices, to define territories, to allocate markets, to boycott third persons, and to otherwise restrain trade.... Agricultural cooperatives perform vitally needed services in our Nation....but it is detrimental to the public interest that they be accorded special and sweeping exemption from the anti-trust statutes....." (See Congressional Record, July 24, 1961, Page 12315.) Under marketing orders the cooperatives in our industry will be able to maneuver outside the restrictions of the anti-trust laws.

(Continued on page 703)

A. H. I. News Notes

HARRIETT M. GRACE, Director
Amercian Honey Institute
Madison, Wisconsin

IT'S ABOUT THAT TIME AGAIN —that wonderful time of year when you can walk into almost any woman's kitchen and inhale that delightful aroma which means holiday cookery is in progress. But wait a minute—can you detect honey in that fragrant mixture which is filling the air?

As a honey producer or packer, it is important to you that all women who bake for the holidays (and there are many) know how much better Honey Holiday products are. Honey baked goods stay fresh longer, contain more moisture, taste much better.

Why not let your customers in on the secret of real success in Holiday cookery—Honey? But don't just shout it from the hilltops; offer them some help by giving a HONEY HOLIDAY COOKERY recipe leaflet with every container of honey you sell.

The colorful honey cookery leaflet gives honey-sweet recipes for glazed Christmas cookies, Christmas Jewel Boxes, Poinsettia Balls, Honey Fruit Cake, and Christmas Honey Stars. Collectively the recipes call for almost 3½ pounds of honey. You can get 100 of the leaflets for only $1.25 by writing to the American Honey Institute, 114 North Carroll Street, Madison 3, Wisconsin.

Add the honey aroma to all the homes you can by distributing HONEY HOLIDAY COOKERY leaflets.

Of special interest to honey folks is the new Metropolitan Life Insurance campaign based on bees and honey. Metropolitan is using the theme to encourage their salesmen to follow the example of the busy bee. At the same time the honey industry is getting some excellent publicity.

A large poster illustrated with a gold and black honeybee and gold comb design proclaims:

"This is National Honey Week"
"A bee doesn't gather Honey in the Hive — Buzz your prospects".

A small brochure similarly illustrated advises:

"Don't Bumble — Buzz Around
See your prospects and 'Bee' in clover".

Confining Queens

GUSTAVE TELSCHOW
North Lake, Wis.

WHEN THIS short article appears in print, the triumphs and failures of the last honey season will be a thing of the past. The beautiful autumn leaves have fallen and we have enjoyed another Indian summer. The bees, being packed, are clustered with plenty of honey and are ready for the usual cold spells of a Wisconsin winter.

We had another big honey crop this year. The flow started June 15th and was quite steady until the second week of July. A 12-day drought started during the last days of June and almost stopped the nectar flow. The fields and lawns were turning brown. The basswood trees started blooming and gave a good yield. Two good showers came and started the clover blooming again and gave a steady flow of nectar until August 20th.

In regard to my article in July Gleanings, this last season I used nine colonies with the queens confined with queen excluder zinc. I discovered that the brood frames must be quite free from drone cells, as the drones trying to leave the hive through the queen excluder zinc would interfere with the working bees leaving and coming into the hive. In order to make this plan a complete success some way must be provided to let the drones out of the hive. The ventilation at the end of the brood frames does cut down the inclination to swarm.

It is wise to go slow in confining queens, to prevent them from leaving while swarming, when producing section comb honey. It is still in the experimental stage.

Research Review

DR. NORMAN E. GARY
Research Associate
Cornell University
Ithaca, N. Y.

Drones in Queen Cells:

BEES THAT ARE hopelessly queenless often attempt to construct emergency queen cells over drone larvae. Occasionally colonies under the supersedure impulse will also demonstrate this behavior. In most cases the drone larvae die but a few of them may complete their development and emerge as adults that appear normal.

Some observations of drones in queen cells were recently recorded by Dr. M. V. Smith at Ontario Agricultural College. He placed an apparently normal supersedure cell in an incubator to hatch, only to find later that a large drone emerged from the cell. A microscopical examination for pollen in the food residue of the cell base provided evidence that the drone developed from royal jelly rather than from the normal drone larval diet. However, drone larvae grafted into queen cells have a very low survival rate, indicating that royal jelly may not be a good food for drone larvae.

Smith, M. V.
Drones in queen cells. Bee World. 42 (8):202-3. 1961.

Brood Feeding Activities:

IT APPEARS THAT worker larvae are differentiated into queen larvae because of the differences in quantity and quality of brood food or royal jelly fed to the larvae. Still unsolved, however, is the question of whether nurse bees of a certain age produce this special brood food or whether individual nurse bees of any age can control the composition of food they place in a cell.

Drs. Furgala and Boch of the Canada Department of Agriculture attempted to answer the question in the following experiment. They marked and introduced 100 newly emerged bees into a colony every other day for 20 days. At that time the queen was caged and six combs of uncapped larvae were introduced, one comb for each day of larval development. Three bars of queen cells of various ages were also placed in the colony. Daily examinations of the colony were made for 18 days and the distribution of marked bees on the brood of known age was recorded. At each examination the capped frame of brood was substituted by a frame of eggs so that nurse bees always had a choice of all ages of larvae to feed.

It was found that young nurse bees (1 - 10 days old) visited young worker larvae more often than older worker larvae. Quite interesting is the fact that older nurse bees visted the queen cells more often than young nurse bees. This research indicates that provisioning behavior, and perhaps the quality of food, is affected by the age of nurse bees. Investigation is being continued along these lines.

Furgala, B. and R. Boch
Distribution of honeybees on brood. Bee World. 42(8):200-202. 1961.

Beeswax Digestion by Larvae of Wax Moth:

ONE OF THE MOST specialized forms of digestive processes known occurs in the wax moth larva, **Galleria**

(Continued on page 695)

Professor Edwin J. Anderson (left) of Pennsylvania State University, explaining the differences in honey to Mr. John Wills, president of the Chester County Beekeepers' Association. – Photo by Good News Productions, Inc.

Miss Sally Sue Smith, Kansas City, Kansas, the 1961 Kansas State Honey Queen, will represent her state in the forthcoming National Honey Queen contest to be held in conjunction with the American Beekeepers' Federation Meeting in Biloxi, Mississippi. – Photo by Olin Wilson.

NEWS REEL

This fall, Gleanings had the pleasure of calling on Baxter Woodman of Grand Rapids, Michigan. While there we snapped the above photo of Baxter in his well-kept apiary.

Of all the distinguished visitors Gleanings has entertained, none has been more welcome than Dr. M. H. Haydak who, with his wife, called on September 20. Dr. Haydak's contribution to scientific beekeeping has come about through his wide experience not only in the scientific but practical as well. He has done a vast amount of painstaking work in developing successful substitutes for pollen and at one time dieted entirely on milk and honey for 12 weeks as an experiment – for those results, see article on page 682. Pictured above, from left to right, are Dr. M. H. Haydak, Mr. Huber Root, and Mrs. Haydak.

Editorials

Don't Let Bees Starve

WE SHOULDN'T just assume that all colonies have an ample amount of stores for winter. We should make sure that they are well supplied with food for winter and early spring needs. If combs of honey are not available for feeding bees short on stores, thick sugar syrup made of two parts granulated sugar to one part of water can be fed, even during early November. Feed the syrup when it is hot or warm. The bees will take it quite readily during mild weather. If friction top pails of syrup are inverted over the opening of the inner cover, or over the top bars of the frames the bees will take the syrup quite readily. The covers of pails should each have a dozen holes punctured with a two-penny nail.

Fall Apiary Management — Then and Now

AROUND 40 YEARS AGO, when we operated 1,000 colonies of bees in single story brood chamber hives, the apiary management was rather laborious and costly. We had 20 apiaries near Medina. Some of the colonies were wintered in quadruple winter cases, others in double walled packed hives. It was necessary to feed the bees thick sugar syrup before winter packing was completed.

Our records show that during the fall of 1922 we fed 2,000 ten pound pails of thick sugar syrup made of two parts granulated sugar to one part of water. We had a large 140 gallon tank for making the syrup. The ten pound pails filled with sugar syrup had lids perforated with a two-penny nail. The pails were inverted over the top bars of the frames. If the weather was not too cold the bees took the warm sugar syrup quite readily.

We started feeding the bees the first week in October and planned on finishing the feeding by the end of the month. As we recall, there was practically no brood in the combs at the time the feeding was started and this was as it should have been because we wanted the bees to store the syrup in the cells of combs from which bees had recently emerged.

During recent years we have found normal colonies have brood in from four to six combs the first week in October. It would appear that this brood rearing later in the season may be due to an increase of fall honey plants or possibly a change in seasons.

At present, our labor is reduced to a minimum, since the feeding of sugar syrup is no longer necessary. We winter bees in two story hives, the upper story being filled with honey, in addition to some honey in the lower story. We do not apply any packing material to our colonies but we do aim to have hives in locations protected from prevailing winter winds. If we were farther north where winters are colder and bees are confined to their hives during long cold spells we would wrap hives in black building paper.

Let's Support the American Beekeeping Federation

THIS NATIONAL BEEKEEPING organization of ours cannot operate without funds. People who understand the workings of the Federation are needed to guide its destiny. Our industry with over half a million colonies of bees producing over a quarter of a billion pounds of honey annually, requires intelligent management.

A recent letter received from Joseph O. Moffatt, secretary-treasurer of the American Beekeeping Federation, Fort Collins, Colorado, mentions some of the activities of the Federation, a few of which we will mention:

It helps to sponsor a booth at the Home Economists' Convention.

It sponsors the National Convention each year.

It represents beekeepers in Washington. Your organization tries to obtain favorable legislation for beekeepers and equally important, tries to prevent passage of harmful legislation.

The Federation sponsors a honey queen who will promote honey.

The Federation sponsors a National Honey Show to help promote honey.

A News Letter is printed six times a year to help keep members informed of the latest Federation affairs.

Beekeepers over the country should help themselves by helping the American Beekeeping Federation which needs our moral and financial support.

Changing Bee Pastures Change Honey Colors and Flavors

MOST BEEKEEPERS HAVE observed changes in the character of honey plants that are accessible to their bees. In most instances the changes are gradual.

Years ago, in the vicinity of Medina, alsike clover was quite plentiful and beekeepers secured good crops of delicious white honey. The same was true in western Ohio. Alsike is still grown for seed in a few areas.

Sweet clover was quite popular some years ago and beekeepers secured large crops of honey, especially in western Ohio and the mid-western states. Alfalfa was later used in crop rotation but it is not so dependable as sweet clover for good crops of honey.

The June 1954 issue of Gleanings carries an article by Dr. W. E. Dunham of Ohio State University entitled "June and Mid-summer Honey Flows" which occur in certain areas of Ohio. The June honey flow is of comparatively short duration and quite intense. The mid-summer flow commences around July 20 and lasts through August 15. The sources of nectar for this flow are, alfalfa, red and Ladino clovers, and soy beans.

Dr. Dunham mentions the importance of having colonies up to good strength in readiness for this mid-summer honey flow. In some instances it is necessary to replace worn-out queens, also to furnish adequate comb space.

Changes are doubtless occurring in other states adjacent to or near Ohio. We know that in the Province of Ontario, during recent years, the major honey crop has been stored later in the season than it was some years ago, this being due in part to a change in crop rotation, also weather conditions.

In eastern Ohio and in fact, in some areas of the northeastern states, intensive farming no longer prevails. Part-time farmers have jobs in nearby cities and some town people with jobs in cities have moved into the country. Goldenrod, aster and other honey plants have sprung up. The production of white honey is decreasing and amber colored honey production is on the increase. Some people who have become accustomed to the white honeys imagine they do not like amber colored honeys. However, people are finding out that most of these darker honeys are not objectionable, and in fact, have a good flavor. Some people do not care for light colored honey but prefer the dark honeys.

We are living in a changing world, even in beekeeping. Beekeepers who live in areas where amber honey is increasing will be making a mistake if they do not try to educate the future generation to use darker brands of honey.

Live and Learn

PROPOLIS PETE

WE SPEAK OF normal weather, but there is no such thing. When we call it that, we really mean average weather. Take last spring for instance. Around here it was so cold and rainy that it was way into July before the bees began to put up surplus. Before they had a chance to put up much of a crop, the honey plants had gone to seed. But you should see what that cold and rainy spring did to the fall flowers. "Wowee" and egad! Never in my beekeeping have I seen so much goldenrod and aster. And are the bees working them! To leeward of the row of hives the smell is terrible, if you don't like it, but in my nose it beats Chanel No. 5.

Unless something comes up to stop the flow, my bees are going into winter with a vast plenty of stores. Even the colonies that are near the dividing line between being good enough or not, are putting up more than enough to last them into what would be "normal" spring weather next April and May. Since my system of management has been to build up for the spring flow, and save the entire fall honey for wintering, I have never put on supers for this flow. Generally it isn't big enough for much in the way of surplus over what the bees need for themselves, consequently I have never made any attempt to sell fall honey. If I did and then had several "normal" years in a row when I didn't get any surplus, I'd lose my customers. So, all in all, I still think that it is best for me to work my bees to have honey to sell to the summer people.

The poor crop of spring honey that I got this year isn't building much good will for me. I had to ration it out, and only the little customers who buy a pound or two got all they asked for. I didn't dare to advertise, so some customers who wait for my ad are mad because I didn't let them know it was ready. Ah well, next year will be different.

After reading the above maybe you are going to say that I handle my bees badly. Maybe yes, and maybe no, but pretty soon you will find, as I did, that you are going to have to adapt your methods and management to your own situation. That is what I have tried to do, and up to now have been fairly successful. Maybe a better beekeeper could double the crops that I get, who knows?

On the subject of adapting yourself to local conditions, a funny thing happened to me a short time ago. On the road that runs by this place I have one of those RFD mail boxes. When I went up to get the mail this day, a scrap of paper was lying in the road. How it got there I don't know. Maybe somebody read this saying in a book and copied it down. Maybe somebody was trying to compose a gem of literature to hand down to posterity. Maybe they lost it, or maybe they threw it away. Anyway, it has sense, and you won't go far wrong in your beekeeping if you follow its teaching. Here is what the paper said — "Advice from the multitude costeth nothing, and is usually worth just that. In the book thou mayest read what to do and when, but only the voice of experience may tell you why or how."

There isn't much that can be added to that, epecially if you are just finishing up your first season, or if you are contemplating the start of a few colonies next spring. Maybe you can say the same thing, without the punch in another way. Listen to the sayings of those who have had more experience than you, and read and study as much as possible, but bear in mind that your own personal success is going to come from the application of your own observations and the interpretations of what you see and hear.

That's enough of a sermon for this time.

Bee bee tree (**Evodia danielii**).

Let's Talk About HONEY PLANTS

DR. HARVEY B. LOVELL, University of Louisville, Louisville, Kentucky

BEE BEE TREE (**Evodia danielii**). The two trees which were given me by Fred Schwoebel at the Morris Arboretum in Philadelphia in pots four years ago were well rooted and made a good growth the first year. One grew four feet and by this year was over 30 feet tall. On July 5, this summer, I discovered that it was in full bud. The other tree was only 35 feet tall and much more branched, but showed no sign of bloom. The buds developed very slowly and the first blooms were noticed on July 20. Although only a few flowers had opened there were several honeybees working on the clusters. The clusters were so high that I watched them through a 20-power telescope on a tripod. By July 26 there were many flowers in bloom and an average of three bees per cluster. There were 26 clusters on the tree and over 100 flowers per cluster.

The flowers were waxy white and the tree was quite attractive. The Bee bee tree was in competition with two large **Vitex negundo** bushes which attracted numerous bees for a period of three months beginning about June 1. These two trees together will make an ideal combination for beekeepers who want to extend their honey flow into August.

I had to cut off a cluster of the Bee bee tree to examine and photograph the flowers as the tree was so tall that all the bloom was 40 feet or more from the ground. This height made observations on the habits of the bees very difficult except through my telescope.

On August 16 I noticed the clusters had lost so many of their flowers that they were no longer attractive looking but they were still being worked by bees. This continued for three more days, by which time the flower clusters were bare. In spite of the numerous

visits no seeds were set due to the absence of another blooming tree to cross pollinate them. Next year if both my trees bloom I should have abundant seeds.

Ontario. Victor Mesley of Kempville is one of several people who have written me recently about the Bee bee tree. Here are some answers to his and other beekeepers' questions.

1. The honey appears to be unknown as the tree has been very rare.
2. It takes about four years for a young seedling to bloom.
3. The species is winter hardy at the Arnold Arboretum near Boston, Massachusetts, and it should do well in parts of south Canada, particularly in Ontario.
4. The tree is easily propagated from seeds, which should be planted in the fall, as they need the action of frost to help them germinate.
5. Pellett Gardens at Atlantic, Iowa had a few seedlings last spring and will undoubtedly have some more next spring. Write for their catalog.
6. Very little is known about the growth of the tree in this country as yet. Any beekeeper with trees large enough to bloom, please write me about your experiences with this potentially fine honey tree.

Illinois. Mr. J. R. Hall of Duquoin, writes me that he is going to plant some rape next year. He is keeping bees for a part-time activity and finds that his 106 hives are running into work. He has kept bees as a hobby for 29 years and reports that 1959 was the poorest year in his experience, but he got a good crop in 1960.

Blue vine (Ampelamus albidus). One hears very little about this former fine honey plant. This year a vine climbed up a shrub by my living room window, and for weeks I could watch bees working the flowers within three inches of the windowpane in late August and early September. This plant, also known as vining milkweed, has been all but eliminated by weed sprays.

From A Knot Hole To Beekeeping

E. B. YERGER
Bernville, Pa.

FORTY YEARS AGO, I moved to a farm belonging to my wife's uncle. This old gentleman had five colonies of bees in old homemade hives.

One sunny day a swarm appeared and hung in an old apple tree. As I heard the sound of bees, I took off like a jet into a wagon shed, making sure the doors were closed securely behind me, as I was extremely afraid of bees.

I spied a knot hole, and from this hole I peered out and watched the old man hive this swarm of bees. This observation gave me an idea. I said to myself, "This old man is not afraid of bees, why should I be?" So, after he had the bees hived and I knew the dangers had passed, I came out of my hiding place and asked him many questons about bees. He removed his bee veil and gloves and told me there was really nothing to it.

This whole procedure interested me so much that I subscribed to a bee journal, also sent for an encyclopedia on bee culture, plus a course in beekeeping at the Pennsylvania State University which is ably handled by Prof. E. J. Anderson. By doing so, I gained a vast knowledge of the "Busy Bee"; of course, not just by reading alone, but by experiences of my own and also of professional bee men.

During the depression years, I was supported solely by my bees, through sales of honey, and renting bees to fruit growers for pollination.

So, after 40 years as a beekeeper I have gained my experience the hard way and today I give thanks to the "Knot Hole," the bee journal and the old man who had given me the inspiration to become a member of the beekeeping family. Consequently, the fear of bees has long vanished and today I enjoy working with them.

Honey and Dates Make a Good Team

MRS. BENJ. NIELSEN
Aurora, Nebraska

LIKE HONEY the date is too often regarded as a seasonal food. When cool weather arrives, thoughts turn to hot biscuits and honey. And, as we honey-way cooks know, Nature's golden sweet can be used steadily through the year in concocting the most delectable treats — from fruit cocktails to desserts. Likewise dates which are excellent keepers and are available right through the year are used mostly when zippy weather comes along. We are served date cake so often then that it becomes more than a little difficult to show much enthusiasm when coffee after coffee gathering ends in date cake.

Luscious honey date cake. — Photo courtesy The Kellogg Co.

Honey and dates have a special affinity and combined make super treats delightful to use all through the year! Sandwich fillings, candy, cookies, stuffed confections, muffins, rolls, fruit cake — let's team them up and serve these all-too-seasonal foods right through the year!

Honey-Top Date Cake

Three-fourths cup sifted flour, 1 teaspoon baking powder, ½ teaspoon salt, ¼ cup chopped nutmeats, ½ cup finely cut pitted dates, ½ cup soft butter, ⅔ cup honey, 3 eggs, separated, ½ teaspoon vanilla, ½ cup whole bran cereal, and 2 tablespoons milk.

Honey Topping

One-half teaspoon cornstarch, 3 tablespoons orange juice and 1½ tablespoons honey.

Sift together flour, baking powder and salt; combine with nutmeats and dates. Blend butter and honey. Add egg yolks, vanilla and cereal; beat well. Add sifted dry ingredients alternately with milk, mixing well after each addi-

(Continued on page 699)

The Florida Apiary Inspection Program

Talk given by Dr. W. G. Cowperthwaite, Director of Division of Plant Industry at the Fifth Annual Beekeepers' Institute, July 6-8, 1961.

"A State Act which became effective on July 1, 1957, provided for compensation for bees and equipment destroyed by the State Plant Board because of A.F.B."

THE PROBLEM of American foulbrood disease was responsible for the Florida State Legislature's enactment of the Bee Disease Act of 1919. Today, 42 years later, American foulbrood still is a problem, but the disease has been controlled to the extent where Florida enjoys the lofty position of ranking third among the nation's producers of honey.

In 1919, American foulbrood was considered as big a threat to the honey industry as was citrus canker to the orange growers of the state. Citrus canker, as you may recall, was directly responsible for the creation of the State Plant Board, the organization that was given authority to conduct the bee disease eradication program. The State Plant Board now is the Division of Plant Industry of the State Department of Agriculture.

The bill providing for prevention and eradication of diseases of honeybees was introduced by Representative Thomas C. Ray of Calhoun County, where honey production was an important industry. The Act carried an appropriation of $5,000 per year, not nearly enough even at that time to maintain an adequate program.

Execution of the new law was placed under the direct supervision of Plant Commissioner Wilmon Newell, who had a good background in apiary practices. One of the first steps taken after adoption of the law was initiation of eradication work against American foulbrood in two west Florida counties. All colonies of bees and all used beekeeping equipment shipped into Florida thereafter had to be accompanied by a certificate of inspection from the state of origin.

C. E. Bartholomew of Orlando was appointed in July as assistant to the plant commissioner in bee disease eradication and the following month C. F. Glenn of Wewahitchka was named district apiary inspector. Dr. Newell and his two aides concentrated their efforts in the Apalachicola River area and managed to inspect 3,800 colonies of bees during the first quarter of that fiscal year.

A second district inspector, J. P. Anthony of Apalachicola, was hired in September and assigned to Franklin County. By the end of that first year, 15,007 colonies had been inspected and 103 colonies found infected with American foulbrood and destroyed.

In contrast, the 1959-60 records show 149,227 colonies inspected by the present eight-man field force, with

1,422 infected colonies found and destroyed.

From these figures, it is evident that the state is holding its own against the disease, despite rapid growth of the honey industry in Florida and a big increase in the traffic of bees into the state. It has been estimated that one-half of all bee diseases discovered in Florida can be traced to migratory beekeepers or bees from other states. Beekeeping today has acquired a national flavor, with beekeepers moving their colonies long distances in order to insure continuous sources of nectar.

The size of the American foulbrood problem was evident in the early days of the program, with the result that two additional district inspectors were appointed in 1920 and assigned to the Pinellas-Manatee area.

In that year Bartholomew resigned as assistant to Newell and Charles A. Reese was named to the position. The following year, veteran inspector J. C. Goodwin assumed the position and remained there until 1926 when he became nursery inspector and was followed by Robert E. Foster in the apiary position. Mr. Goodwin later won renown by discovering the presence of the Mediterranean fruit fly in Florida. As you may recall, he had picked up some grapefruit in Orlando in 1929 and when he prepared the fruit for a meal at his Gainesville home a week later he found the larvae which turned out to be that of the Medfly. His prompt action in reporting the find started the first successful eradication of the Medfly in Florida.

The Bee Disease Law of 1927, more or less the basis for today's regulatory structure, was enacted by the State Legislature in a move to strengthen the entire framework of the program. An amendment in 1939 provided that beekeepers from other states furnish the State Plant Board with a certificate of inspection showing no case history of American foulbrood in the two years prior to movement of colonies into Florida. The inspection must be made within 30 days preceding the move. Notice also had to be given of the approximate date of moving and the destination to which the bees would be shipped.

On August 10, 1946, the State Legislature authorized the use by the State Plant Board of sulfathiazole in the treatment of colonies infected with American foulbrood. After a 10-year trial, the rule was rescinded on May 17, 1956.

The 1947 State Legislature passed a law prohibiting all movement into Florida of used beekeeping equipment and bees on comb, but the law was ruled invalid the following year by a state circuit court. Such movement then was permitted when accompanied by a certificate of inspection.

Robert E. Foster retired in March 1948 from the State Plant Board and from the position which now was known as chief apiary inspector. Actually, the title had undergone one other change during his 22 years in office—from assistant apiary inspector to apiary inspector. Foster was responsible for making the bee and honey exhibit at the Florida Fair at Tampa an outstanding success.

Mr. Foster served several terms as president of the Apiary Inspectors of America, one term as president of the Southern States' Beekeeping Federation, was a member of the Board of Directors for the American Honey Institute for 11 years and was a lifetime member of the Florida State Beekeeping Association.

He was succeeded in the position by Hardin S. Foster, a district apiary inspector who was no relation. The new chief gained nationwide repute as an authority on bees and did much to boost the Florida industry into the ranks of national leaders. Mr. Foster's reputation was so widespread that upon his retirement in 1957 he was sought as a consultant by many Caribbean countries anxious to increase vegetable yields through pollination.

Another inspector was elevated to the post of chief, with Russell A. Martin succeeding Hardin S. Foster. Martin did an outstanding job of applying education and information tactics to apiary inspection in Florida, combining a fine talent for photography with an ability to use the photos in illustrating talks before apiary groups. One of his finest pictures was reproduced as

(Continued on page 697)

Communication Among Social Bees-A Review

DR. NORMAN E. GARY and
DR. ROGER A. MORSE
Department of Entomology
Cornell University
Ithaca, New York

IN 1950, Professor Karl von Frisch published a book, **Bees, Their Vision, Chemical Senses, and Language.** This book gave an insight into the complexities of bee communication and was received enthusiastically by beekeepers and other interested persons.

The Harvard University Press has just published a book by Dr. Martin Lindauer, a student of Professor von Frisch, entitled **Communication Among Social Bees.*** This book originated from a lecture series given at several colleges and universities in the United States. Dr. Lindauer has investigated honeybee communication and has attempted to answer important questions of interest to research workers and beekeepers.

One of the first questions answered in his book concerns the manner in which an individual bee is informed about the tasks which need to be performed in the hive. To answer this question an observational study was made on one worker bee during her entire life. This bee was observed for a total of 177 hours and she spent 56

* Available for $4.75

hours inspecting and patrolling within the hive. It was concluded that patrolling behavior enables each bee to gather information about the work to be done. On the other hand, information on foraging for nectar and pollen is conveyed by the recruiting behavior of field bees as described earlier by von Frisch.

Another question concerns the form of communication used by scout bees in the swarm. No one, until recently, had been able to determine the manner in which the scout bees conveyed information about a new hive to the other bees in the swarm. Dr. Lindauer found that the scouts danced in the same manner as they do when communicating information about food sources.

In one instance while watching a swarm it was observed that the dancing scout bees reported 21 different possible home sites. As each scout bee danced, other worker bees followed the dance and in turn inspected the sites. For three days it appeared that no decision could be reached. On the fifth day after the swarm had left the hive, agreement was reached and all the scout bees danced the same dance, indicating that one of the 21 possible home sites was most desirable. At that time the swarm moved to the new home.

In another instance no agreement could be reached by the scout bees for a period of 14 days. At the end of that time rainy weather began and the scout bees discontinued looking for nesting sites. The swarm then began to construct comb in the place where it had first clustered despite the fact that it could not possibly survive in such an exposed position. This is one explanation why bees sometimes establish a nest in an exposed position.

Dr. Lindauer's book contains many other fascinating and educational facts about bees. This book will be a handsome addition to any beekeeper's library.

Dr. Lindauer has been offered a position at Harvard University. We hope that he will accept this position since his presence in the Northeast would stimulate beekeeping research. He has been honored by being a fellow of the Rockefeller Foundation and under their sponsorship has spent time studying the Indian bees and stingless bees in Ceylon and Brazil.

Do Queen Excluders Work?

E. C. SCHWARTZ
Hummelstown, Pa.

MY PARTNER and I who have several colonies of bees had an unusual experience the other day.

We caught a swarm of bees early in September, which is unusual in this part of the country. We realized they could not build up for winter, and decided to unite them with a weak colony. This weak colony had been a problem to us all summer long, killing one queen after another. They finally got a queen to their liking but were still weak. Some more workers might save this colony that otherwise would not winter without constant feeding.

We put a queen excluder over the weak colony, and put the swarm, queen and all on top in a hive body.

A week later when we examined this hive, we found small patches of sealed brood, and unsealed brood in the super above the excluder. We decided the lady upstairs laid them until we discovered her dead body on top of the excluder. We were puzzled until we saw a worker bee coming from below carrying an egg and placing it in a cell above the excluder. We then saw several more worker bees coming through the excluder carrying eggs, and placing them in cells in the super above the excluder.

I am wondering if any other beekeeper has had the same experience, or is this something new? If this has happened before, what good is the excluder to keep supers free of brood?

Incidentally, we now have a strong colony building up ample stores for the coming winter.

Living In the Land of Milk and Honey

DR. MYKOLA H. HAYDAK
Dept. of Ent. and Economic Zoology, Institute of Agric., Univ. of Minnesota, St. Paul, Minn.

Reprinted from the October 1938 issue of Gleanings in Bee Culture.

ON NOVEMBER 19, 1934, I started a gradual transition to the strict milk-honey diet. First a pint of milk and honey mixture was substituted for breakfasts only. Then the mixture was substituted for lunches also. Finally normal dinners were abolished, and on the eve of Thanksgiving Day (just think of it) a strict milk and honey diet was started. Three tablespoons (100 grams) of honey were dissolved in a little milk and then mixed with the rest of the quart. One pint of such a mixture was drunk every two hours from 8 A.M. to 8 P.M. Buckwheat honey was used the first four weeks of the diet, sweet clover honey another four weeks, and then dark and white honeys were alternated daily.

The first week I was extremely hungry, but later I got used to my new diet and was entirely satisfied. My weight remained constant through the whole period of the diet which lasted 12 weeks. The hemoglobin content of my blood slightly increased. My ability to work was not diminished and I even felt myself more vigorous than usual. There was no feeling of sluggishness or tiredness throughout the duration of the experiment. There was no constipation whatsoever, and the bowels moved normally. However, as already mentioned, milk is low in vitamin C. Therefore, in the second month of the experiment certain symptoms appeared which suggested that my diet was not complete. My skin became dry and pimples appeared on the forehead and face. I never had them before. Later whitish round spots were noticed all over my tongue and the latter felt wooden. After a vitamin C deficiency test was performed, it was apparent that the time had come to add this vitamin to my diet. After I drank seven ounces of orange juice the feeling of woodiness in my tongue disappeared. After that time I supplemented my diet by a daily addition of about 10 ounces of orange juice. In about a week's time all those symptoms, which are mentioned above, disappeared. This experiment showed that a normal adult man can subsist on a milk and honey diet, supplemented with a couple of glasses of orange, tomato, or lemon juice, for a relatively long period of time. This does not mean that the reader should try it. There are such great variations in the food requirement of various individuals, that such a diet can be started only after consulting a physician, and after his approval. During the whole period of my experiment I was under the constant supervision of Professor I. McQuarrie of the Medical School of the University of Minnesota, with whom I had weekly consultations concerning the experiment, and to whom I am very much indebted for his valuable suggestions.

Of course, an addition of a couple of glasses of honeyed milk to the normal diet of children or adult persons should be encouraged, but any drastic change in food habits must be initiated only with the advice of a person who knows the state of your health, and this person is—your family doctor.

Who's Who in the bee world

CHARLES W. GOUGET
Glen Ellyn, Ill.

Do bumblebees make honey? Do they have a queen? What does she do?

ACCORDING TO THEIR social development bees may be divided roughly into three groups: the solitary bees or leaf-cutters that are almost without social tendencies; those at the opposite extreme, the honeybee, which illustrates the most advanced social behavior in the bee world; and a third group, the bumblebees which occupy a place between the other two.

Economically, solitary bees cannot be compared with either bumblebees or honeybees because their numbers are relatively few, but their solitary lives are very interesting in contrast to the more conventional lives of either bumblebees or honeybees. Solitary bees are almost as large as honeybees, but somewhat darker in color, and slightly different in shape. Although their nests may be built in a variety of places, such as in a dead tree or under a shingle or stone, many make tunnels in the ground and use special leaves to construct the "cradle-cups" for the young. The solitary bee does not use wax to make these cups. Instead, the female solitary bee cuts circular discs from leaves with it's mandibles. The discs are brought together in the tunnel cavity and fastened together with saliva glue to form a thimble-like cup. A mixture of nectar and pollen are placed in the bottom of the cup and an egg is laid on it. Unfortunately, the solitary bee has no pollen baskets so that any pollen used in the cradle-cups must be combed from the hairs on the under side of the abdomen. After the egg is laid on the honey and pollen mixture a leaf disc is cut just a little larger than the rim of the cup, and pushed down to make a tight fit. Sometimes as many as 10 cups may be constructed in a tunnel, one ahead of the other. Contrary to what one may believe possible, there is just enough honey and pollen mixture placed in each cup to raise the hatching larvae to adult bees. This procedure is necessary because the mother dies long before the young bees hatch. A solitary mother bee never sees her offspring. Although this "one-feed" larvae production is efficient within itself, the whole procedure of the solitary bee i.e. the building of the nest and cradle-cups, and the collection of pollen and nectar is primitive, clumsy and inefficient because the whole job is done by the one individual. It is much on the order of a cobbler making a whole pair of shoes today as compared with modern methods of manufacturing the same article. As a result of this lack of communal efficiency the pollinating service of the solitary bee is of no great importance.

The first major step toward "streamlining" brood production is found among the bumblebees. In the beginning, the queen who begins the nest is really a solitary bee because she does all the chores of the nest necessary to prepare it for egg production. A colony starts in the spring with a young queen that mated the previous summer. Some species appear as early as March, and others are not seen until May or June. The first few weeks after hibernation are spent in search of food, i.e. pollen and nectar. After feeding for some time, the ovaries begin to develop and eggs may appear. At this point the queen begins to look for a place to build a nest such as a long hedgerow, in a mouse's nest, or along the banks of a stream. In the ground the nest may be no more than an inch in diameter with a narrow tunnel running to the outside. If the hole in the ground happens to include a mouse's nest the

queen will "tease" out the material and line the nest with it. After the nest has been prepared in this manner the queen spends several days in it to dry it out. A few trips from the nest for food helps the queen to orient herself to the new location.

The first egg cell is built in the center of the nest cavity from wax scales on the queen's body. When the egg cell is ready the queen brings in pollen, smooths it on the bottom of the cell and then lays eggs on top. The number of eggs may vary from 8-14 in one cell. After the eggs are laid the queen begins to build a honeypot just inside the entrance, and when it is filled with honey the pot is sealed over. As the larvae develop the queen will cut a hole in the side of the pot to obtain honey to feed them. If they become crowded she may enlarge the cell or even build more cells on the top of those already built by using old wax when possible. However, worker cells are never used over again as they are in the hive of honeybees, instead they may .be used for storing honey and pollen.

While the offspring are developing, the queen flattens herself out over the brood clump to keep it warm, and continues to forage for the young workers until they are old enough to collect nectar for themselves. From then on the queen remains in the nest performing household duties, and laying eggs. Up to this point the queen has been, in effect, a "solitary" bee doing all the chores necessary to make a nest, feed the larvae and keep herself alive.

As soon as young workers begin to forage in the fields more cells are built and the colony grows as the queen lays more eggs. At this point the colony has a distinct division of labor between the queen and the workers. Colonies may vary from a few individuals (workers) with a queen to a few hundred, but large numbers are seldom found, largely because of the clumsy organization of the colony and because each colony is only an annual organization. In spite of this fact, bumblebees are one of our most important pollinators, especially for such crops as red clover and alfalfa where the tongues of honeybees may not be long enough to obtain nectar from the flowers. Other flowers also, because of their structure, must be pollinated by the bumblebee because of its superior strength and size. In addition, it can work faster and longer than the honeybee, even in bad weather.

However, honeybees, more than any others, are the most respected and the most appreciated bees in the bee "world" not only because of their direct benefits to mankind, but also because their communal life can be compared favorably with our own human society. We believe that they have reached the "pinnacle" of social development among bees for many reasons: the social order is a caste system similar to the bumblebee, but much more efficient because of a greater division of labor. The queen is primarily an egg "machine" that does none of the household chores nor the field work of the queen bumblebee. Nurse bees feed the young larvae and drones, clean the hive, and stop up cracks with bee "glue". Workers in the field collect nectar and pollen to feed the colony and its queen, while guards at the entrance of the hive keep out intruders, a truly cooperative enterprise — all for one, and one for all. Large, flat combs with hexagonal cells make for the conservation of space, and more efficient egg production by the queen, and since a colony lives from one year to another, brood comb may be used over and over again, a fact that results in a great saving of time and energy. Honeybees, therefore, are the 20th century model of "streamlined" efficiency in the bee world as compared with the primitive methods of the leaf cutters, and the clumsy, "horse and buggy" methods of the bumblebee.

A comparison of some of the more important attributes of the three groups may be summarized as follows:

1. Solitary bees construct cells of discs cut from leaves, no wax is used. The solitary female does all the work of the nest and supplies each cell or cradle-cup with enough honey and pollen for the entire development of the larva. Only one egg is laid on the honey and pollen mixture, and the mother dies before the young develop.

2. Like the solitary bee the bumblebee lays it's eggs on a bed of pollen in a single wax cell, but the larvae are fed progressively by the mother as they grow. More than one egg may be laid

(Continued on page 698)

A Talk To Beekeepers

M. J. DEYELL

IN NORTHERN latitudes bees should be ready to go into winter quarters, the colonies populous in bees, having an adequate amount of stores for winter and early spring food. Most beekeepers winter colonies of bees in two story brood chambers. The upper story should be practically filled with honey together with a considerable amount of honey in the lower chamber. There should be pollen in both chambers. Authorities say there should be at least the equivalent of five or six combs of pollen. This is needed for early brood rearing next spring at a time when bees are unable to collect pollen from natural sources. This double brood chamber hive should weigh between 120 and 130 pounds. If it weighs less it may be necessary to do some feeding during the spring months. Some make a practice of feeding each colony one or two 10-pound pails of thick sugar syrup in the fall, especially in areas where bees collect late fall honey that is not of good quality for winter bee food. However, when bees get a few winter cleansing flights they are likely to winter quite well on stores that are not supposed to be the best for wintering.

Putting Wet Combs Back on Colonies

Some years ago I put wet supers on colonies when there was very little honey coming in. You can imagine what happened. It took a little time to put on the supers and, of course, the bees smelled the honey in the combs of wet supers from which honey had been extracted and began robbing. Before I finished putting on the supers the yard was in an uproar. The bees were angry so I got away as quickly as possible. Fortunately the apiary was far enough away from a dwelling house so that the bees did not cause any trouble. Since that time I have made it a point to put wet supers on colonies late in the evening and to place them above inner covers with center blocks removed. I would rearrange the position of the supers later.

This small yard is quite near a railroad track. Some years ago when I was working the yard the bees got stirred up and about that time some section men were walking along the track after finishing their day's work further down the line. One fellow evidently got stung and what he said wouldn't sound good in Sunday school.

Since that time I have tried to avoid getting the bees stirred up. I believe I have learned a few things (the hard way) about handling bees properly, during the years.

Watch for Bee Moth

In one of my yards a colony had died out in one of the hives and I had intended to put the supers into use but overlooked doing so. On one visit to the yard I noticed a few webs between the combs which indicated bee moth in the first stage. I gave this super to a colony nearby and should have given the lower super to another colony. In a week or two I looked at the hive again and the lower super was filled with moth web. It is surprising how quickly moths develop when they once get started. The best place to keep supers containing drawn combs during the summer months is on strong colonies of bees. If these supers are kept in the honey house, they should be

This shows what the bee moth will do to combs if not protected.

treated with carbon bisulfide or PDB periodically. In some parts of the country bee moths are not troublesome, but that is not the case in this vicinity.

When Does a Young Queen Begin to Lay?

I remember once when installing some package bees, I didn't have much time to fuss around with the packages so fed the bees liberally with sugar syrup then dumped them into hives containing drawn combs and liberated the laying queens from the cages after dipping the cages containing the queens into a can of water to make sure that the wings of the queens were wet enough to prevent their flying away. The installation of the packages was done quite late in the evening. I visited the package colonies the following day and found some of the queens laying 20 hours after they had been put in the hives. This may be the exception rather than the rule.

At times in the past I have divided very populous colonies late in the summer in order to fill up hives in which colonies had died out earlier in the season. I would simply take the upper brood chamber, sometimes called the food chamber and set it over onto a bottom board, then give this hive a cover. I have found that these queenless divisions will usually rear laying queens in 21 days.

In this area where there is a good flow in the fall, strong colonies can be divided in this fashion, the last week of July near the close of the summer honey flow and the divisions will build up in time to gather an ample amount of stores for winter. When dividing we pay no attention to where the queen is. We make sure there is young brood in each division. Sometimes the divisions will store some surplus honey. Don't try this unless you are in a locality where there is a good fall honey flow.

Avoid Killing Bees Unnecessarily

There is a right way and a wrong way of manipulating hives of bees. Some beekeepers become rather careless and kill some bees when it is unnecessary. I may have mentioned the following experience once before but it will do no harm to tell it again. I was on vacation driving along the road when I noticed a couple of fellows in a wooded area near the road working with bees. I always carry a bee veil in my car so decided to walk over to see the men. One was a bee inspector and the other the owner of the bees. The colonies occupied double brood chamber hives and were quite populous. The inspector would remove the telescope outer cover and place it on the ground with the flat side up. He would then remove the inner cover and set it aside, then remove the upper story and set it on the flat surface of the outer or telescope cover. Naturally he would kill some bees, since a considerable number of bees were hanging from the bottom bars of the super which he lifted off. He seemed to be a nice chap so I asked if he objected to a suggestion I would make on hive manipulation. He didn't object so I suggested that he place the outer cover on the ground with the open side up or the flat side down so that the upper story could be placed crosswise of the inverted outer cover in order to avoid killing bees. He said he had never thought of this and thanked me for the suggestion. Whether or not he continued the manipulation of hives by his own method, I don't know.

I do try to avoid killing bees unnecessarily since I believe they have as

Hives wrapped in black building paper ready for winter.

much right to live as I have. Now, I realize that there are cross strains of bees and gentle strains but I do believe that the majority of strains or races of bees will respond to careful or decent hive manipulation. The reason bees seem to be cross at times may be due to the fact that we are attempting to manipulate the hives at the wrong time of the day or the wrong season of the year when they are not gathering nectar or pollen. They want to be left alone when they are not gathering honey.

To Pack or Not to Pack

Some beekeepers in the North pack bees, others do not. It would appear that some protection in the way of winter packing is advantageous, especially in the far North where bees are confined to hives during most of the winter months. Some years ago it was customary to apply heavy packing, from four to six inches of packing on the sides and ends of the hives and six or eight inches of packing material on the top. At present the majority of beekeepers who do pack, use black building paper with a couple of inches of shavings or chaff between the paper and the hive. Some use only paper, leaving an opening in the paper adjacent to the bottom hive entrance. Those who believe in top entrances have such an entrance in the upper brood or food chamber adjacent to a small opening in the building paper. The black paper seems to absorb some of the sun's rays during the winter months and this tends to generate some heat around the hive, which is advantageous.

In this area of Ohio comparatively few beekeepers apply winter packing. Most of the commercial men believe in packing their bees with plenty of honey.

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Gleanings in Bee Culture
Medina, Ohio

NEWS and EVENTS

Texas Beekeeping School
Sunday, November 12th
1 to 5 p. m.

Biological Science Building,
Texas A. &. M. College, College Station, Texas
Walter Barth, Chairman

1:00 Welcome—Roland T. Sykes, Pres., T.B.A.
1:10 School begins on the theme of "A SEASON WITH BEES"

Instructors:
Jack Happ, Managing Editor, Gleanings in Bee Culture
A. H. Alex, Texas A. &. M. College
Claud Burgin, Chief Apiary Inspector
Howard Weaver, Howeard Weaver Apiaries
Curtis Meier, Dadant & Sons
Walter Barth, The A. I. Root Co.

* * * * * *

"BEEKEEPERS' BUZZ"

Y.M.C.A., South Solarium
A. & M. College Campus
College Station, Texas
SUNDAY EVENING – 7:00 to 10:00 p. m.
November 12, 1961

A social gathering of beekeepers and friends.
A time to make new friends and renew old friendships.

* * * * * *

TEXAS
Beekeepers' Association
Program 80th Annual Meeting
Memorial Student Center
College Station, Texas
November 13th & 14th

MONDAY, NOVEMBER 13th

A. M.
8:00 Registration, 2nd floor, M.S.C.
9:00 Call to Order.
—Pres. Roland T. Sykes, San Antonio
9:10 Welcoming Address
—Dr. J. C. Gaines, Head, Dept. of Ent., College Station
Response – Leslie Atkins, Waxahachie
9:35 Address of the President
Roland T. Sykes, San Antonio
Instructions to Committees
10:00 Bee Research – Dr. Nevin Weaver, Texas A. & M. College
10:20 Beeswax – The Old Man of the Wax Kingdom, Curtis Meier, Mgr. Dadant Branch Office, Paris
10:40 The Value of Propionic Anhydride to Texas Beekeepers – Stanley Weaver, Navasota
11:00 Progress Report on Preparation Plans for the National American Beekeeping Federation Meeting to be held in San Antonio in January, 1963. Report to be given by Walter Barth, Gen. Mgr. of The A. I. Root Co. of Texas, Inc., San Antonio.
11:30 Ways to Promote Honey – Mrs. Jack Happ, Pres. Ladies' Auxiliary, Ohio B. A.
12:00 Noon Adjourn for lunch

P. M.
1:00 Texas Movie Premiere:
"Tanganyika Beeswax"
Shown through the courtesy of Dr. G. S. Townsend, Ontario Agricultural College
1:30 Women's Auxiliary Meets
M.S.C. – Mrs. E. Neuse, President
1:30 U.S.D.A. Research at Baton Rouge
Dr. Otto Mackensen, Apiculturist,
2:00 How the New State Sales Tax Will Affect Texas Beekeepers – Curtis Meier and Walter Barth
2:15 THE PAUSE THAT REFRESHES
2:25 How Does the Current U.S.D.A. Farm Program Affect Texas Beekeepers? – Wm. J. Cremins, U.S. Dept. of Agric.
3:00 Round Table Discussion: "What Do We Think About Marketing Orders"
Binford Weaver, Moderator
Panel: Glen Gibson, Minco, Okla., Past Pres., ABF. V. Pres., Okla. Beekeepers' Assn.. G. C. Walker, Jr., V. Pres. ABF., Edward Burleson, T. W. Burleson & Son, H. A. Victor, Montell, Texas. E. E. Youngblood, Jr., Pearsall, Texas. James R. Stroope, Caddo Mills, Texas.
5:30 Adjournment for the Banquet
7:30 Beekeepers' Banquet. Mem. Student Ct.
Toastmaster: L. W. Lang, Corpus Christi
Banquet Speaker: Jack H. Happ, Managing Editor, Gleanings in Bee Culture, Medina, Ohio

TUESDAY, NOVEMBER 14th

A. M.
8:30 Reports from Representatives of Local Associations: North Texas B.A.; Rio Grande Valley B.A.; Harris Co. B.A.; and Houston B.A.
Report from the Apiary Inspectors' Meeting at Omaha, Neb. – Claud Burgin, Chief Apiary Inspector
Report on the National Meeting at Omaha. Binford Weaver, Navasota.
10:00 Business Meeting
Old Business
New Business
Selection of Delegates to the National Meeting at Biloxi, Miss. in January 1962
Reports of Committees
Auditing—James R. Stroope, Chairman
Legislative—Binford Weaver, Chairman
Minutes —L. W. Lange, Chairman
Resolutions—I. M. Tomlin, Chairman
Nominating—C. S. Engle, Chairman
Adjourn Annual Meeting
Following Adjournment a meeting of the directors of the Texas B.A. will be held

* * * * * *

Texas Beekeepers' Association
Women's Auxiliary

Mrs. Edwin Neuse, President
Kingsbury, Texas
1:30 p.m., Monday, Nov. 13, 1961
Memorial Student Center
Mrs. Jack Happ, Pres., Ladies Auxiliary, Ohio Beekeepers' Association

NORTH DAKOTA
Beekeepers' Association
Jamestown, North Dakota
November 4, 1961

The annual North Dakota beekeepers' meeting will be held November 4 at the Gladstone Hotel in Jamestown. Beekeepers are invited to display any new or improved pieces of equipment. Display material should be sent to Dr. R. L. Post, Entomology Department, North Dakota State University, Fargo, by November 1.

MASSACHUSETTS
Norfolk County Beekeepers' Assn.

Norfolk County Beekeepers' Association opened its fall season with a meeting on October 2 at Norfolk County Agricultural High School in Walpole. After the usual question and answer period, during which problems of the members were discussed by the more experienced beekeepers, and a report on the summer activities of the association, a drawing was conducted for the club hive. There was no suspicion of collusion when the winner was John Schifino for the second year in succession. The theme of the educational program was a discussion of "Experiences with the Two-Queen System", with Irving Sibert and Lawrence Reynolds in charge.

The next meeting will be held on November 6, a the same hour and place as above. Very appropriately, the theme will be "Wintering Bees". The question-answer period, the door prize, and refreshments are regular features of the meetings. Visitors and new members welcome. — Ralph S. Pease, Corresponding Secretary.

NEW YORK
Empire State Honey Producers' Assn.
Syracuse, N. Y.
December 15 and 16, 1961

The annual two-day winter meeting of the Empire State Honey Producers' Association will be held at the Syracuse Hotel, Syracuse, New York, on December 15 and 16, 1961. Banquet Friday night, December 15.

Improving beekeeping practices for greater return at lowered expense will be the general theme of the program, plus reports on experiments being conducted towards this goal throughout the U. S. All beekeepers and friends are cordially invited. — M. C. Trippe, Sec.-Treas.

MINNESOTA
Beekeepers' Winter Meeting
Minneapolis, Minnesota
December 2, 1961

This meeting will be held at the Curtis Hotel, Minneapolis, Minnesota, December 2, 1961. A report by the Apiary Location Committee, headed by E. C. Honl of Winthrop, Minnesota, a report by the magazine committee headed by Robert Banker, of Cannon Falls, and a report of the Honey Crop Survey and Marketing Day at Alexandria, Minnesota, will be made by State Marketing Chairman, Glen McCoy. A panel discussion on the "Honey Removal Procedure 1961", with C. D. Floyd as moderator wll prove instructive and interesting.

A banquet will be served at 6:00 p.m. followed by slides and entertainment. —F. Q. (Quint) Bunch, Secretary.

MISSOURI
Midwestern Beekeepers' Association
Kansas City, Missouri
November 12, 1961

The Midwestern Beekeepers' Association will hold its regular monthly meeting at the I.O.O F. Hall, 812 Westport Road, Kansas City, Missouri, 2:30 p.m. Sunday, November 12, 1961.

The meeting will feature a speaker and the subject for discussion will be "November in the Bee Yard".

Refreshments will be served. Everyone welcome. — James A. Worrel, Sec.

ALBERTA
Beekeepers' Association
Calgary, Alberta
November 23 and 24, 1961

The annual convention of the Alberta Beekeepers' Association will be held on November 23 and 24, 1961 in Stampeder Hotel, Calgary, Alberta, Canada. Registration will be at 9:00 a.m. on November 23. The theme of the program will be "Quality Control". Prominent speakers from Canada are:

Dr. T. A. Gochnauer, Chairman of the Apiculture Section, Canada Department of Agriculture, Ottawa, Ontario; Dr. Don Peer, Nipiwan, Saskatchewan;

Mr. John Corner, Provincial Apiarist, Vernon, British Columbia; Mr. F. R. Armstrong, Chief Inspector of Honey and Maple Sugar, Canada Department of Agriculture, Ottawa, Ontario; Mr. Victor Mesley, President of the Canadian Beekeepers' Council, Kemptville, Ontario; Mr. Frank Garland, Manager, Manitoba Honey Producers' Co-Operative, Winnipeg, Manitoba; and Mr. Jack Edmunds, Provincial Apiarist, Edmonton, Alberta.

Features of the program will be the presentation of Honorary Life Memberships to a number of long time beekeepers for their contributions to the association; presentation of the Master Bee Farmer Award, and the annual banquet and entertainment sponsored by the Calgary and District Local Association.

ALBERTA HAS NEW CHIEF APIARY INSPECTOR

Mr. Roger Topping has taken over the position of Chief Apiary Inspector for the Province of Alberta. Mr. Topping succeeds Mr. Alan Frost who, after three years of very useful service to the beekeepers of Alberta, has returned to Australia.

Mr. Topping developed his interest in beekeeping on the Isle of Man, coming to Canada in April, 1954. He was previously employed as a technician at the University of Alberta. He has been very active in the local beekeeping association.

Our best wishes go to Mr. Topping in this, his new position. We are confident that he will contribute much to the welfare of the beekeeping industry in the Province of Alberta.

(Continued on page 701)

Obituaries

GERALDINE A. HUFF 1923 – 1961

GERALDINE A. OSGOOD was born at Bozeman, Montana, March 9, 1923, the daughter of John J. and Callie Osgood. She came to Oregon as a young girl. August 1, 1940, she married Ernest Huff, who survives. For the past 10 years she has lived at Newberg, Oregon, and was engaged in the honey business of B-Good Apiary which her parents had operated the past 29 years.

She was a member of the Episcopal church and president of St. Martha's Guild.

Surviving, besides her husband, are a son Kelly, a daughter Evelyn, her mother and step-father, Mr. and Mrs. John D. Burt, her grandmother, Mrs. R. C. Osgood, and two sisters, Mrs. E. L. Abel, and Mrs. Boyd Hoops.

She was an enthusiastic sales woman and promoter of honey, well known and loved by all who knew her. She was a member of American Beekeeping Federation and practiced the Check-Off Plan in buying honey.

L. F. CHILDERS

MR. L. F. CHILDERS of New Franklin, Missouri, passed on recently at the age of 83. Mr. Childers was at one time associated with the University of Missouri and worked with Dr. Leonard Haseman on developing Sulfathiazole to control A.F.B. He received his M.S. in agriculture in 1906.

Mr. Childer's wife preceded him in death last April. He leaves a son Norman F. Childers of Milltown, N. J., Chairman of Department of Agriculture, Rutgers State Unversity, also a daughter, Mrs. Anne G. Barton of Nevada, Missouri.

Buy and Sell

Classified rates: 18¢ per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it) count as one word. Copy should be in by the 10th of the month, preceding publication.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. HUBBARD APIARIES, ONSTED, MICHIGAN.

IOWA HONEY, one can or truck loads. RUSSELL D. SMALLEY, BEAVER, IOWA.

CLOVER extracted honey in sixties. ABRAM BRUBAKER, 1525 September Dr., LANCASTER, PA.

TUPELO, wild flower, alfalfa, or orange, in 60's. LANCASTER COUNTY DUTCH GOLD APIARIES, 910 State St., LANCASTER, PA.

HONEY—In any size container, also Mail Order Dealer for Bee Supplies. Write for prices. L. E. ALLEN, TIPTON, MICH.

MICHIGAN'S finest raspberry, basswood, clover comb honey in 4 x 5 window cartoned sections. Super Deluxe, $9.00 case; Deluxe, $8.00; Extra Fancy, $7.00; Fancy, $6.00; No. 1, $5.00; No. 2, $4.00. E. Z. QUICK WAY B FARMS, BOYNE FALLS, MICHIGAN.

HONEY from MEXICO for sale. Campanilla honey (aquinaldo) does not crystalize readily, excellent flavor, in 60 pound tins, $8.00 FOB, Middlebury. Individual cut comb honey (2½ ounces) in attractive cartons of 24 individual combs (unclassified), $18 per case of six cartons, FOB, Middlebury. Delicious honey from orange, coffee and chalahuite blossoms. Ideal for gift packages, honey of different flavors. CHAMPLAIN VALLEY APIARIES, P. O. Box 127, MIDDLEBURY, VT.

CLOVER HONEY in 60-lb. cans. Will deliver truck loads. DOROTHY KLINE, FAIRMONT, NEBRASKA.

Two-hundred 60's white clover, one-hundred of dark amber goldenrod and aster. TRAPHAGEN, HUNTER, NEW YORK.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE — We cannot guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on C.O.D. terms except where the buyer has thoroughly established his credit with the seller.

WANTED—All grades of extracted honey. Send sample and price. DEER CREEK HONEY FARMS, LONDON, OHIO.

BEESWAX WANTED—Highest prices paid in cash or trade for bee supplies. THE A. I. ROOT CO., MEDINA, OHIO; COUNCIL BLUFFS, IOWA; SAN ANTONIO, TEXAS.

CASH FOR BEESWAX. Write as to quantity and we will quote price. MUENCH-KREUZER CANDLE CO., INC., SYRACUSE, N. Y.

HONEY WANTED for bottling, all types in drums, tins, trailer and car lots. Send samples each lot. Write: CHAS. E. FARRIS CO., 99 Hudson St., NEW YORK CITY. Esh since 1910.

WANTED—White extracted or comb honey. Send sample. MILLERSPORT HONEY CO., MILLERSPORT, OHIO.

WRITE FOR SHIPPING TAGS and quotations on rendered beeswax. We buy from one pound up and if you have over 25 pounds let us work it into foundation for you at a 25 per cent saving. WALTER T. KELLEY CO., CLARKSON, KY.

WANTED—Buckwheat and light amber honey. EASTERN FOOD PRODUCTS, 421 Bedford Ave., BROOKLYN, N. Y.

WANTED—Honey in 60 pound cans, also beeswax any quantity. L. E. ALLEN, TIPTON, MICHIGAN.

ALL GRADES extracted honey wanted in both 60 pound cans and 600 pound drums. PRAIRIE VIEW HONEY CO., 12303 12th S.., DETROIT 6, MICHIGAN.

WANTED, chunk comb and extracted honey. Mail sample and price. STOLLER HONEY FARMS, LATTY, OHIO.

WE RENDER cappings, old combs and buy your beeswax. Shipping tags sent on request. M. R. CARY CORP., GPO Box 818, SYRACUSE 1, NEW YORK.

WANTED — Chunk and extracted honey. Send sample and price. RONALD CULP, CIRCLEVILLE, OHIO.

WANTED — Clover, goldenrod, and buckwheat honey. Write and send samples. CLOVERDALE HONEY CO., FREDONIA, N. Y.

WANTED—Comb and extracted honey. WM. MARCH, R. D. 3, MANTUA, OHIO.

CARLOTS or TRAILER loads, bottling grade and baker's honey, drums. Submit samples, offers. KANE IMPORT CORPORATION, 10 E. 40th St., NEW YORK 16, N. Y.

BEE SUPPLIES FOR SALE

WRITE FOR CATALOG—Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. HUBBARD APIARIES, Manufacturers of Beekeepers' Supplies and Comb Foundation, ONSTED, MICHIGAN.

THE BIGGEST Bee Supply Catalog published (64 pages) free for the asking. Listing many items not found in other catalogs. No agents—buy direct and save 20%. WALTER T. KELLEY CO., CLARKSON, KENTUCKY.

QUEENBEE PAINTING OUTFITS, $1.50. INTERLOOKERS, $3.00 postpaid. SOUTHWICK APIARIES, WABAN, MASS.

FREE CATALOG—Cypress bee hives and bee supplies. Save up to 40% on hives that last. MYERS CRAFT MANUFACTURING CO., BURGAW, NORTH CAROLINA.

BEFORE YOU SELL your honey or buy your honey containers see HUBBARD APIARIES, ONSTED, MICHIGAN.

NEW CYPRESS BEE WARE 9⅝ supers, $1.05, 6⅝ supers, 70¢, 5¾ super bottoms or covers, 60¢, telescope cover (without metal) 75¢. C. L. STONECYPHER, HOMERVILLE, GA.

USED EQUIPMENT FOR SALE

ONE 20-FRAME Root Simplicity Extrac or with ½ h.p. Motor, Capping Drying Plates and Screens, like new, Price, $150.00. One Brand Capping Melter (Jr. Size). 1 Hershey-Woodman Wax Press. ROY O. BODETTE, 5946 Douglas Rd., TOLEDO 13, OHIO.

FOR SALE

PROPIONIC ANHYDRIDE will be in stock September 1. All new, Food and Drug approved on August 2 for removing honey from bees. For free information. HUBBARD APIARIES, ONSTED, MICHIGAN.

ONE CRANDELL Automatic Shut-Off Filler for 1 pound and 5 pounds. Shuts off by weight electrically. HUBBARD APIARIES, ONSTED, MICHIGAN.

BEES AND QUEENS FOR SALE

WE USE ALL POSSIBLE CARE in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold or if dissatisfaction occurs. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

CARNIOLAN and CAUCASIAN BEES for 1961. Booking queens, each $1.25, clipped and marked. 2 pound package with queen, $4.00. 3 pound package with queen, $5.00. LEWIS & TILLERY BEE CO., R. 3, Box 261, Phone DU 2-8371, GREENVILLE, ALABAMA.

QUALITY ITALIAN QUEEN BEES—Summer Prices—each $1.00, 5 or more, 90¢ each, 25 or more, 85¢ each. A. G. WOODMAN CO., GRAND RAPIDS 4, MICH. or LENA, S. C.

ITALIAN QUEENS — Two extra good strains. STARLINE queens, $1.30 each. OUR REGULAR STOCK queens, $1.10 each or $90.00 per hundred. ALAMANCE BEE COMPANY, Rt. 1, GRAHAM, N. C.

BEES & EQUIPMENT FOR SALE

ONE HUNDRED COLONIES of bees for sale. Good bees, good equipment. No disease. Cash. WM. J. SHAWLER, OAKLAND, IOWA.

SEEDS

HONEY PLANTS our specialty. Catalog on request. PELLET GARDENS, ATLANTIC, IOWA.

WANTED

LARGE BEE SUPPLY Manufacturer and Honey Processor wants Supply Dealers and Honey Buyers. Write for Catalog and Honey Prices. HUBBARD APIARIES, ONSTED, MICH.

WANTED THIS FALL: 20-300 colonies, with or without crop. State type, condition, and price. CLOVERLAND PRODUCTS, Route 2, FREEPORT, ILLINOIS.

WANTED—Up to 300 colonies and super equipment, located in Ohio. ARDON DENLINGER, 5695 Germantown Pike, DAYTON 18, OHIO.

HONEY LABELS
Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.
C. W. AEPPLER COMPANY
Oconomowoc, Wisconsin

"SWARMING STOPPED COLD"
95% Foolproof
No Gimmicks
No Gadgets
No Tricks
Bigger Crops - Better Beekeeping
Full Directions Price $1.00
BAKER'S APIARIES
Glencoe Illinois

J. E. WING & SONS
49 Years Continuous Service
Italian Package Bees
and Queens
Our Specialty
Knights Landing, Calif.

CONNEAUT
BEST SIXTY for the SIXTIES
Acclaimed The Best
By More Beekeepers
Handled by
Leading Jobbers
THE CONNEAUT CAN CO.
Conneaut, Ohio

HONEY WANTED
Carloads and less than carloads. Mail sample and best prices in all grades.
W. F. STRAUB & CO.
5520 Northwest Highway Chicago 30, Ill.

MISCELLANEOUS

BEES REMOVED from house or tree or hive without touching either house or bees. Bees will then move honey into hive. Save property, honey, and bees with my method. Send $2.00 for details. Satisfaction guaranteed. GEORGE HAWKINS, Rt. 1, LAWSON, MO.

RENDERING every day in our all new plant. All honey saved from cappings. Rendering slumgum and old combs. Write for free shipping tags and rates. HUBBARD APIARIES, ONSTED, MICHIGAN.

LEARN PROFITABLE Sideline Raising Wax Worms. HUBBARD APIARIES, ONSTED, MICH.

BEEKEEPERS' OWN CHRISTMAS CARDS. Write for details and publication's list covering international research to. BEE RESEARCH ASSOCIATION PUBLICATIONS. 11 Poplar Grove, MAIDSTONE, KENT, ENGLAND.

QUALITY RUBBER STAMPS, made to order. Write for prices. PETE'S RUBBER STAMP MFG. & SALES, PRESTON, IOWA.

ROYAL JELLY

SUPER STRENGTH 100 mg. Royal Jelly capsules in bottles of 100 for $10.00. PRAIRIE VIEW HONEY CO., 12303 Twelfth St., DETROIT 6, MICHIGAN.

PURE ROYAL JELLY — $8.00 per ounce, postpaid. Write for Wholesale prices. THE STOVER APIARIES, INC., MAYHEW, MISS.

MAGAZINES

THE SCOTTISH BEEKEEPER (The official organ of the Scottish Beekeepers' Association.) Scottish in character, international in appeal. Annual subscription $2 post free. Sample copy from ROBERT N. H. SKILLING, F.S.C.T., 87 King St., KILMARNOCK, AYSHIRE.

INDIAN BEE JOURNAL, know interesting facts concerning the honeybees of India. The only Bee Journal of India published in English. Subscription Rs. 12/- or Sh. 17/6d (Sterling) or $2.75 per year (INTERNATIONAL M.O.). Sample copy 2s. or 25 cents. Can be had from The Managing Editor, Indian Bee Journal, Naini Tal, U.P., India.

PROFIT AND HEALTH—Raise dairy goats. Learn how. Monthly magazine, $2 yearly; sample and information 25¢. DAIRY GOAT JOURNAL, COLUMBIA T3, MISSOURI.

DO YOU FIND it difficult to secure information about sheep and sheep ranching methods? The SHEEP AND GOAT RAISER reaches more sheepmen with more information on range sheep than any other magazine published. Subscription, $3.00. Box 189, SAN ANGELO, TEXAS.

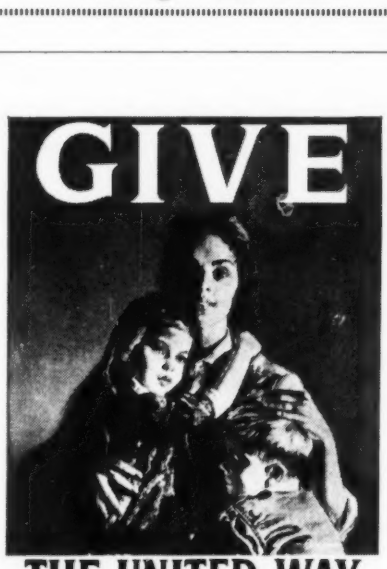
ARCHIV FUR BIENENKUNDE, International journal for Bee Culture and beekeeping economics. Founded in the fall of 1918. Oldest scientific bee journal in the world. Praised again and again for its decades of independent leadership through many endorsements and advice as a valuable source also for the practice. Yearly DM 5.50. Any aspiring beekeeping friend will receive a sample copy. BIENE-VERLAG, GIEBELBACHSTR, 19, LINDAU (B) GERMANY.

BEE WORLD, the international journal of the Bee Research Association published monthly, contains the latest research reports on bees and beekeeping, and also Apicultural Abstracts. Bee World is $9.00 a year to non-members. but the B.R.A. membership subscription of $7.00 includes Bee World. B.R.A. members in America are served by the B.R.A. American Committee, and have their own Branch Library at O.A.C. Details free (or with specimen Bee World and new B.R.A. Handbook, 50 cents) from Apiculture Department, Ontario Agricultural College, Guelph, Ontario, Canada.

WANTED

Short interesting articles based on beekeeping experiences, also clear pictures. We pay for acceptable material upon publication.

Gleanings in Bee Culture



Government Loans

AS OF JULY 31, United States Department of Agriculture reports that loans have been made on approximately one-half million pounds of honey, 85 percent of which is in the state of Florida. The total amount for all states is only slightly more than the same period a year ago and about 50 percent more than two years ago and slightly more than three years ago.

(Continued from page 669)

mellonella (L.). Only one other kind of animal, a family of African Honeyguide Birds, is known to be capable of digesting beeswax to an appreciable extent. The best evidence available indicates that beeswax consumed by man passes harmlessly through the digestive tract.

This unique kind of digestion has been studied by Dr. Roger G. Young, an Insect Biochemist at Cornell University. For this research he has confined wax moth larvae in quart jars on a special diet made of Pablum infant cereal, liquid honey, and glycerol. Whole beeswax as well as chemicals isolated from beeswax were added to the diet by coating them on the Pablum. Wax moth larvae were restricted to these diets for periods of three to twelve days and then weighed to determine their growth response.

It was found that larval growth was stimulated when beeswax was present in the diet. Only 10 percent beeswax increased the growth of larvae from 13 percent to 76 percent over the same diet without beeswax. Paraffin wax also stimulated larval growth to a small degree but alcohols in the diet killed many larvae. It is believed that bacteria in the gut help the wax moth larvae to digest beeswax.

The wax moth is one of the most destructive pests of honeycomb. Further research of this nature eventually may provide clues to new methods of controlling this pest.

Young, Roger G.
The effects of dietary beeswax and wax components on the larvae of the greater wax moth, **Galleria mellonella** (L.). Annals of the Entomological Society of America. **54**(5):657-659. 1961.

Honey for Research:

HONEY FOR RESEARCH purposes is used alone or in combination with other foods for the nourishment of a great variety of organisms ranging from yeasts to higher animals. Very few research workers who are not apiculturists are sufficiently aware that honeys vary tremendously according to the floral source and the methods of processing. Drs. Ghent and Morse recently called attention to some of the most important properties of honeys used for research. They noted that honey absorbs moisture when exposed to the air but that honey of 17.4 percent moisture neither gains nor loses water if stored at 58 percent relative humidity. The primary contaminant of extracted honey is pollen but filtration removes most pollen as well as yeasts which naturally occur in honey. Pasteurization of honey breaks down enzymes and proteins. District differences in minor nutritional constituents of dark versus light honeys influence their use for experimental purposes. For example, yeast growth and subsequent fermentation occur at about twice the rate in dark buckwheat honey as in light clover honey.

Entomologists are discovering that honey is a good food for many kinds of insects reared in the laboratory, especially those insects that consume nectar in nature.

Ghent, Ralph L. and Roger A. Morse
Honey as a constituent in biological media. Annals of the Entomological Society of America. **54**(5):746-747. 1961.

QUEENS

For better wintering and larger honey crop next year replace those old queens now, while young queens are available at lower prices.

We select breeders that show qualities desired for better crops and easier handling.

	Reg. Italians	Is. Hybrids
1-24	$1.00 each	$1.30 each
25-99	.90 "	1.20 "
100 up	.80 "	1.10 "

All queens clipped unless ordered otherwise.

Queens marked by request, 10¢ each extra.

"They Produce"

Rossman Apiaries

P. O. Box 133 Moultrie, Ga.

THANKS TO OUR CUSTOMERS

Thanks for your generous patronage this year. We shipped the largest number of queens in our history.
For 1962 remember that "GULF BREEZE" will again serve you.

BESSONET BEE COMPANY Donaldsonville, La.

BOOKING ORDERS NOW FOR 1962
PACKAGE BEES QUEENS
VIGOROUS CAUCASIAN QUEENS
or
MIDNITE HYBRID QUEENS
Over 30 years experience shipping the Caucasian race of honeybees.
Prices on request.

HOWARD WEAVER & SONS NAVASOTA, TEXAS

HARPER'S
FAMOUS HIGH QUALITY
ITALIAN QUEENS
By Air Mail after June 10th
85¢ each
10 for $8.00 100 for $75.00
We will be happy to supply your needs.
CARLUS T. HARPER
New Brockton, Ala.

PACKAGE BEES & QUEENS
"ITALIANS"
QUALITY DOES NOT COST – IT PAYS
THE WILBANKS APIARIES
Claxton, Georgia

VIGOROUS BEAUTIES
Bred to get the honey.
Italian queens $1.00
W. E. PLANT
Rt. 2 Hattiesburg, Miss.

MERRILL BEE COMPANY . . . thanks all the customers for the nice orders for 1961 bees and queens. Had a good season. Let us figure with you on your needs for another year.
MERRILL BEE CO.
BOX 115 STATE LINE, MISS.

PACKAGE BEES AND QUEENS
Walker-Lee Co. Live Oak, Calif.

PACKAGE BEES AND QUEENS
ITALIANS **CAUCASIANS**
We suggest that now is the time to compare production and cost. We believe that when compared our bees and queens can stand alongside of any.
THE STOVER APIARIES, INC. MAYHEW, MISS.

MIGRATORY BEEKEEPING AN ANCIENT PRACTICE

(Continued on page 660)

Then there is a report that the Romans drifted with their hives down the Rhine. In Germany for many centuries numbers of beekeepers lived a nomadic life on the Lueneburger Heide to obtain heather honey. France also has known beekeeping on river barges equipped to carry hundreds of hives. They followed the same procedure as the Egyptians.

There is also a case of seaborne "beekeeping" on record. In 1830 the London Times reported "As the small sailing vessel was proceeding up the Channel from the coast of Cornwall and running near land some of the sailors noticed a swarm of bees on the island. They steered for it, landed, and after they succeeded in hiving the bees, they took them on board and proceeded on their voyage. As they sailed along the shore, the bees constantly flew from the vessel to the land to collect honey and returned again to their floating hive; and this was continued all the way up the Channel."

THE FLORIDA APIARY INSPECTION PROGRAM

(Continued from page 679)

the color cover for the State Plant Board's 1958-60 biennial report.

Martin resigned in May of 1961 and was succeeded by Philip M. Packard, who had to leave a place on the Commissioner of Agriculture's Advisory Council in order to accept the position.

A state act which became effective on July 1, 1957, provided for compensation for bees and equipment destroyed by the State Plant Board because of American foulbrood.

Although the state dropped the practice of using drugs and antibiotics in fighting American foulbrood, it still is viewed as a good preventive measure once a colony has shown evidence of American foulbrood. Most beekeepers are burning bees and equipment.

QUEENS
ITALIAN
NORTHERN TESTED STOCK
A Dependable Source of
GOOD QUEENS
October 1 to December 1
$1.00 each, any number
After December 1st,
spring prices prevail.
We ship only the best.
A. J. BOETTGER
P. O. Box 1523 Naples, Fla.

BETTER BRED QUEENS
THREE BANDED ITALIANS
Thanks for the wonderful business you gave us this year. Now booking orders for 1962.
CALVERT APIARIES
CALVERT, ALABAMA

No more queens
this season.
Mitchell's Apiaries
Bunkie, La.

HOLLOPETER'S
Hardy Northern Italian Queens
June-November. Our 51st year.
WHITE PINE BEE FARMS
ROCKTON, PA.

QUEENS
CARNIOLAN & CAUCASIAN
NOW is a good time to requeen for young bees for winter and quick build-up in spring.
Your colonies are no better than the queen heading them, so why not have the best?
W. D. REAMS
Box 458 LaBelle, Fla.

WHO'S WHO IN THE BEE WORLD

(Continued from page 684)

in each cell, and a cell may be enlarged if it becomes crowded. In time the queen mother accumulates a group of workers around her which provides a division of labor in the colony, but only fertile queens live over the winter.

3. Queen honeybees lay eggs in empty cells, and the egg is abandoned by the queen after it is laid. The queen is fed a special food by workers, and larvae are fed by nurse bees, all of which makes for greater efficiency in brood production. The perennial nature of the colony results in tremendous numbers of bees in a colony, and the accumulation of enormous quantities of honey which may be "borrowed" by the successful beekeeper.

HYBRID QUEENS

are necessary to show the extra pounds of honey for beekeeping profit. **MIDNITE HYBRIDS** give you the extra good wintering colonies plus the ability to store honey in beautiful white capped combs. If wintering is your problem plan now to incorporate **MIDNITE HYBRIDS** in your own testing program.

STARLINE HYBRIDS, the oldest commercially successful hybrid available brings you the vigor of a hybrid strain in the Italian race. COMPLETELY NEW this season, this STARLINE has been tested for five seasons bringing you the finest strain of bees available. If you have not used the **NEW STARLINE,** requeen out all of your poorer queens and try them for your next honey crop.

ALL HYBRID queens are reared under constant, stimulant feeding to insure large, well-developed queens to head populous colonies. Plan on using these queens in all your normal work. RETURN MAIL shipments throughout summer and early fall.

Quantity	1 to 25	26-99	100 up
STARLINE or MIDNITE	$1.30	$1.20	$1.00
Italian	1.00	.90	.80

Clipped and marked by experienced handlers for only 15¢ each additional.

YORK BEE COMPANY
BOX 300 JESUP, GEORGIA

The strains preferred by leading Honey Producers.

Write us for further descriptive folders on the Midnite and Starline hybrids.

BEESWAX CONTENTS OF OLD COMBS & WAX MOTH EXCRETA

(Continued on page 661)

sult from differences in the composition of the comb itself.

Summary

Differences in the average beeswax content of six samples of old honeycomb from different hives indicate that the composition of the comb varies from hive to hive as well as from cell to cell and special care should be exercised in sampling and analyzing this material. Variation in the beeswax content of wax moth excreta samples from different hives suggest that the comb on which the moth larvae feeds may influence the composition of the excreta. More refined studies of this relationship are needed.

Acknowledgments

Samples used in this study were supplied through the courtesy of Dr. E. Oertel, Southern States Bee Culture Laboratory, (USDA) Louisiana State University, Baton Rouge, Louisiana.

1. Haydak, M. H. 1936. Is wax a necessary constituent of the diet of the wax moth larvae? Annals. Ext. Soc. of America. 3, p. 223-246.

EDITOR'S NOTE — Several conclusions may be drawn from this discussion:

1. **Capping wax is a cleaner wax than wax from old brood combs for cappings are less apt to be infested by moths in the relatively short time before they are rendered.**
2. **Combs from strong colonies of Italian bees are nearly always free from moths. To prevent later contamination if stored, they should be fumigated and then kept in a moth tight enclosure.**
3. **Combs containing moths or moth eggs should be fumigated—for safety's sake, several times.**

CARBOLINEUM
Makes Hives Last Longer

Used by leading beekeepers everywhere.

Bottom boards treated with Carbolineum last years longer.

Repel mice and other rodents by treating entrance guard strips.

Treat inner covers to keep out ants.

Write for full information.

CARBOLINEUM COMPANY
Dept. G, Milwaukee 9, Wis.

HONEY AND DATES A GOOD TEAM

(Continued from page 677)

tion. Beat egg whites until stiff but not dry. Fold into batter. Spread in greased and lightly floured 8x8-inch pan. Bake in moderate oven 350°F. about 40 minutes. Remove from oven. Combine cornstarch, orange juice and honey. Pour over warm cake. Let stand until cold. Yield: 9 2½-inch squares.

Honey Cinnamon Roll Date Ring

Two packages active dry yeast, ¼ cup warm water, 1 cup buttermilk, ¼ cup honey, ⅓ cup butter, 4 cups flour, 1½ teaspoons salt, 2 eggs, 1¼ cup chopped dates, ¼ cup honey, ¼ cup brown sugar, packed, 2 tablespoons orange juice concentrate, ½ cup chopped almonds and 1 teaspoon cinnamon.

Dissolve yeast in warm water. Heat buttermilk to lukewarm; add honey and butter. Stir until blended. Mix in two cups of flour and beat until smooth. Mix in yeast mixture and salt. Add eggs, one at a time, beating well after each addition. Gradually add remaining flour. Cover and let rise in a warm place until doubled in bulk, about 1½ hours. Prepare filling by mixing dates, honey, brown sugar, orange juice, almonds and cinnamon. Punch down dough and divide in two portions. On a lightly floured board roll out half the dough to a 12-inch square. Spread with soft butter, cover with one-half the honey date filling. Roll up dough as for jelly roll. Cut into 1¼-inch slices. Arrange slices, cut side down, in a greased 10 inch tube pan or a three-quart ring mold. Repeat procedure with remaining dough, arranging slices on top of those already in pan. Let rise until doubled, about 30 minutes. Bake 45 minutes in a moderate oven, 350°F.

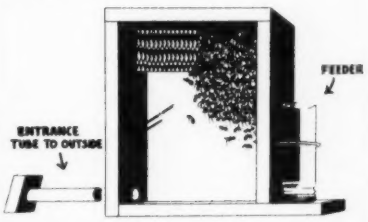
A LETTER TO MRS. BEEKEEPER:

Why haven't we written you before, well it is just now that we have a really important problem. Mr. Beekeeper is alarmed (so are we) that Junior takes so little interest in the bees.

We have spent years developing these Hobby Observation Hives and a Pet Strain of bees for them. Now, we have gone further and made little supers for them so Junior can take off honey just like Dad. From Minnesota a girl writes us she was moving her Pet Bees to school so the other children could enjoy them. From California a little girl writes us her neighbor has DANIELS' Pet Bees and she goes there to watch them. (She entered name contest hoping to win a Hobby Hive.) Another wrote wanting supers for the Hobby Hives, so now there are little clear plastic sided supers and our little Pet Bees can make comb honey right at the breakfast table.

Now, we believe these Pet Bees in their little glass-sided homes have a mission in their life – to teach and make friends for beekeepers and honey, and they are so much fun.

Now, Mrs. Beekeeper, we would like to see every boy and girl enjoy and learn from these Pet Bees. Would you tell your friends about them? Tell them any boy or girl can care for them without stings. Tell them everyone that has bought them say they are just the best of Pets.



Tell about the price of the Model 10, how it was priced within everyone's reach. how this fellow Daniels carefully designed it cost-wise, then removed all profit, then deducted some more and charged it to advertising until the price of the Model 10 Complete with Pet Bees is only $4.89 plus $1.39 mailing. (For Christmas. a gift certificate and the bees mailed in the spring.)

Then there is the Deluxe Model 20. A beautiful Hobby Hive of cypress wood, genuine Plexiglas sides, embossed aluminum cover panels, etc., a life-time gift. Priced only $18.00. Postpaid for Christmas; the Hobby Hive sent now, the bees in spring.

And they are gift advertised in ESQUIRE. THANKS MA'AM and don't forget to order one for your family!

Sincerely,

R. C. DANIELS & COMPANY
PICAYUNE, MISSISSIPPI

MONTHLY HONEY REPORT

(Continued from page 647)

ly because of the light orange flow in California. Oklahoma reports a fair crop with moisture and honey market only fair. The market is strong in Arizona where bees have been hard hit by heavy dusting. In contrast, honey is moving slowly in Wyoming where the crop averages about 100 pounds. A fair to good crop has been obtained in Colorado with a chance for a late flow if rains let up. Utah reports around a 120 pound average. And, an interesting report comes from W. P. Nye of Utah. In an experiment he conducted last summer, shaded colonies produced an average of 152 pounds while unshaded colonies produced an average of 135 pounds per colony.

Iowa came out all right this year with a good flow and prices ranging from 13 to 14 cents per pound, f.o.b. producer's honey house. Montana's fine honey is also moving at 14 cents f.o.b. producer. Similar prices are reported from Minnesota, Wisconsin, Michigan and Indiana. The crop in Ohio shows a great variation, ranging from a 60 to 110 pound average.

A spotty and less than normal crop is reported from New York. This has not been a good year in New Hampshire although there is always hope for a fall Goldenrod crop. Southern Pennsylvania reports a good crop but a short one for the rest of the state. New Jersey reports a good fall flow. Retail honey prices appear to be higher than average in this area.

Shoot for profit - - - - Shoot for the STAR

Order STARLINE queens this season and profit.

STARLINE: 1-24, $1.20 25-99, $1.15 100-up, $1.05
ITALIAN: 1-24, .90 25-99, .85 100-up, .75
Clipping 5¢ each, marking 5¢ each.

Reg. U. S. Pat. Off.

GARON BEE CO. **DONALDSONVILLE, LA.**

JENSEN'S QUALITY QUEENS
Dadant Starline Hybrid
1-24, $1.30 25-99, $1.15 100 up, $1.00
Jensen's Magnolia State
1-24, $1.00 25 99, 90¢ 100 up, 80¢
JENSEN'S APIARIES
Macon, Miss.

ITALIAN
Package Bees
and
Queens
JOHN S. SHACKELFORD
Rio Oso, California
Phone: Wheatland, Calif. NEptune J-2392

PACKAGE BEES & QUEENS
and ROYAL JELLY
Write for Prices
JACKSON APIARIES
P. O. Box 265 Funston, Ga.

QUEENS THAT SATISFY
From improved yellow banded Hybrid strain. Marked and clipped unless otherwise specified. Shipped Air Mail for quicker delivery.
1 to 24, $1.10 25 up, $1.00
No packages please.
S. C. SQUIRES
P.O. Box 566 Chapel Hill, N. C.

Texas Caucasian Queens
1-24 . . . $1.45 25-99 . . . $1.35
100 up $1.25
Live arrival and Health Certificate guaranteed
KANES APIARIES
Ph. SW 8-3039 Hallettsville, Texas

For 1962
CALIFORNIA CAUCASIANS
Don J. Strachan
2522 TIERRA BUENA RD.
YUBA CITY, CALIF.

BOOKLETS CAN SELL MORE HONEY

(Continued from page 653)

People enjoy reading interesting facts about the products they eat. A poultryman once told me he received a cordial response from leaflets he put into each carton of eggs whch told about the high food value of eggs.

Some beekeepers print their own leaflets. For instance, E. B. Hampton of Vernal, Utah, has an attractive four-page leaflet in which he gives some recipes and tells the honeybee story in a most interesting manner.

Printed helps of all kinds are available from beekeeping supply houses, the American Honey Institute, Commercial State Bank Building, Madison 3, Wisconsin; the California Honey Advisory Board, 31658 Coast Highway, South Laguna, California. Your county home demonstration agent will have copies of state and USDA publications.

You can find among the many booklets and folders available to you most any kind of selling helps you need. And, who knows? Someday, someone may even decide to print the honey story in Braille — for you to distribute to the blind!

BEEKEEPING ON PRINCE EDWARD ISLAND

(Continued from page 663)

Package bees arrive during the end of April or the first of May and are generally fed combs of honey or sugar syrup. This feeding is necessary until dandelion and fruit bloom opens, which in this country is about a month after the bees arrive.

Hive build-up is very fast during this time, and the small beekeeper faces a bit of swarm trouble, because at that time of year he is busy doing other farm work and neglects to give them the added space soon enough.

On Prince Edward Island bees are kept primarily for the honey they produce and not as pollinators, as is the case in other places. A small number of colonies are used in clover seed, cucumber and blueberry production.

NEWS AND EVENTS

(Continued from page 691)

IOWA
Beekeepers' Association
49th Annual Meeting
Room 205-206 Memorial Union
October 19-20, 1961
Ames, Iowa

THURSDAY, OCTOBER 19

A. M.
9:00 Registration
10:00 Marketing Top Grade Iowa Products —J. R. Harris, Iowa State Marketing Div.
10:30 Honey Contamination —Roy Grout, Hamilton, Ills.
11:00 Here and There in the Federation —Henry Hansen, President, ABF
11:30 Research on Honey —Dr. Frances Carlin, Iowa State Univ.
12:00 noon Recess for lunch. Proceed through the cafeteria line

P. M.
1:30 Soil Conservation and the Farm Program (Their Effect on Beekeeping) —L. B. Liddy, State Sec. of Agriculture
2:15 How I Succeeded as a Beginner —Earl Robinson, Oelwein
2:45 State Fair and National Honey Show Glen Stanley, State Apiarist
3:00 Report of Secretary and Treasurer
3:15 Report of Nominating Committee and Election of Officers
3:30 Board Meeting
6:00 Banquet—Oak Room
7:30 Introduction of Honey Queen Candidates—Martha Soder, Stratford
8:00 Crowning the Iowa Honey Queen — L. B. Liddy
8:30 Presentation of State Fair Trophies

FRIDAY, OCTOBER 20

A. M.
9:30 Registration
10:00 4-H Activities—C. J. Gauger and Dr. Robert Moorman, Iowa State Univ.
10:30 Report from the National Auxiliary Helen Partello, President
10:45 On the Way to Biloxi —Thomas Doonan, President
11:00 State Apiarist Report—Glen L. Stanley

Auxiliary Program

FRIDAY, OCTOBER 20

10:00 a.m. Demonstrations by Honey Queen Contestants
12:00 noon Luncheon in Cyclone Cellar and Business Meeting
1:30 p.m. Tea at Mrs. Victor Thompson's, 1614 Carroll, Ames, Iowa

VIRGINIA
State Beekeepers' Association
Richmond, Virginia
December 9, 1961

The Virginia State Beekeepers' Association will hold its winter meeting in Richmond, Virginia, December 9, 1961, at the Y.M.C.A., 2 West Franklin Street. The meeting will begin at 10:00 A.M. All beekeepers are invited to attend. — Henry W. Weatherford, Sec.

(Continued on next page)

NEWS AND EVENTS

(Continued from page 701)

KANSAS

Northeast Kansas Beekeepers' Assn.
Kansas City, Kansas
December 3, 1961

The Northeast Kansas Beekeepers' Association will meet December 3, 1961, at the I.O.O.F. hall, 2107 Silver Avenue, Kansas City, Kansas. A Christmas dinner will be served at 1 o'clock. Business meeting at 2:30. A film will be shown entitled "The Schultz Honey Farms". Everyone is welcome. Plan to attend. — Mrs. Bert M. Parrish, Sec.

OREGON

State Beekeepers' Annual Convention
Boise, Idaho
December 7, 8, and 9, 1961

The dates of the Oregon State Beekeepers' annual convention are December 7, 8, and 9th, 1961. We will meet this year as guests of the Idaho Association in conjunction with the Northwest Beekeepers' Association. The meeting will be held at the Owhyee Hotel in Boise, Idaho. Oregon beekeepers plan to attend. — Oliver Petty, Sec.

We wish to thank each and every one of our customers for a very good season.
1962 PRICES
2 lb. pkg. with queen $3.75
3 lb. pkg. with queen 4.75
4 lb. pkg. with queen 5.75
NORMAN BEE CO.
ROUTE 1 RAMER, ALA.

RICH MOUNTAIN APIARIES
COSBY, TENNESSEE
Will this year offer the famous "LITTLE" strain of Italian queens.
Have been wholesaling to Little Apiaries for the past several years.
QUEENS 1 to 24 ..... $1.20
25 to 50 ..... 1.10
Discount on large orders. Queens marked and clipped FREE when requested.

Booking orders now.
Over 35 years a shipper.
Send for FREE Circulars.
BLUE BONNET APIARIES also
HOME of AULT BEE FARMS
Weslaco, Texas

ENABLING ACT — FOR

(Continued from page 666)

research;

2. Quality standards would be the basis of the law; and

3. Our industry board would be able to recommend restrictions on honey imports, when necessary, through the proper government channels.

The effects of the 1958 publication of Dr. Jarvis' book are wearing off. This book greatly increased our honey sales and thus our market did not feel the effect of our decreasing export market, which dropped from almost 21 million pounds in 1958 to 12 million in 1959 and to some 7 million in 1960.

In addition to the loss of our export market to honey-producing countries south of the border, Red China, etc., we are now faced with a tremendous increase in honey imports. Honey imports jumped from almost 4 million in 1958 to better than 5 million in 1959, and in 1960 almost tripled, not quite reaching 14 million, an increase of almost 10 million pounds in a three-year span, and that is only the beginning.

While many of us are independent individuals who would much prefer to stand on our own two feet without a helping hand from the government, what would our position be today if we did not have price support?

The only reasons for the strong opposition to this legislation, as I see it, are:

1. The most feasible plan for collecting compulsory check-off funds **would place the assessment on bottlers and not on the vast number of beekeepers.** Those who did not cooperate with the voluntary check-off plan, naturally do not relish the idea of being forced to comply.
2. The legislation would put the beekeepers in command of their own industry. American honey producers will suffer if imported honey replaces American honey. **Those opposing the legislation remain unaffected by honey imports.**

Personally, I resent those opposing this legislation taking away from the beekeepers the right to make their own decision on this important issue.

ENABLIN

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ENABLING ACT — AGAINST

(Continued from page 667)

This will put the independents in the industry in a desperate position whereby they will have to join a cooperative and submit themselves to its dictates, or go out of business. For those independents who feel the courts would offer refuge from such unfair and unjust manipulations, we should reiterate that there is **no recourse to the courts.** The Supreme Court of the United States in U. S. vs. Ruzicka (320 U.S. 287) goes so far as to rule that independents in suits brought under the marketing order could not attack the validity or correctness of any of the departmental actions in court, even as a matter of defense.

Since the exclusion of honey from the Omnibus Farm Bill, this minority group that stands to gain most has continued to lobby for marketing orders. They have introduced new bills, No. HR 8680 and HR 8684, and S 2472 into the House and Senate respectively in complete disregard of the wishes of the American Beekeeping Federation, which has gone on record twice, both in 1960 and again in 1961, to table marketing orders. They have done so under the guise of obtaining mandatory assessments on honey for promotion and research, quality control, and restrictions of imports.

Mandatory assessments are impractical in view of the fact that there are 400,000 to 500,000 beekeepers in the United States. A few commercial beekeepers would carry the financial load, with tens of thousands of others getting a free ride, and most of the money collected would be dissipated in policing and administration. And, note this, **under marketing orders the regulations are explicit in stating you cannot use funds collected under mandatory assessment for advertising or sales promotion.**

The question of quality control has never been a problem. There seems to be nothing wrong with our present grades and standards, and there has been no discussion of this problem at recent meetings.

The control of imports is a real problem, but marketing orders are not the way to attack it. Unfortunately, imports are controlled by the Department of Commerce and the State Department, under reciprocal agreements with foreign countries. They are political in character, and outside the scope of the Department of Agriculture, which deals primarily in domestic issues. I believe the wool and lamb industry is a good example of a strongly knit group that has tried for years to get higher import duties on wool and lamb. Obviously marketing orders could not help them, as they asked to be excluded from the recent farm bill.

The leaders of this minority group, in a letter to "Fellow Beekeepers" on August 7, 1961, stated that marketing orders would not contain "production controls....marketing quotas....or a limitation on the number of colonies owned or operated." They are in no position to make these statements. How could they possibly know what will or will not be included in marketing orders? They are not on the Department of Agriculture. Controls, quotas, and colony limitations are all likely possibilities once we vote for marketing orders. This group that would place marketing orders on our industry is baiting a trap with empty arguments to trap the independent producer and packer. If the bait is taken, we independents are doomed.

We must stand back and look rationally at the heart of the issue: economic freedom and personal freedom for the majority of the industry on one hand, and on the other the domination of the industry by a minority group of cooperatives, and the gradual extermination of all independent honey people.

Improved Leather Italians for '62
Bred for comb honey production.
Raised on honey entirely.
Free circulars on why price included for '62.
Sold out of select tested and breeding stock for this season. Very sorry we were unable to supply your requirements again this season.
Thanks
Booking orders for '62.
O. K. ANDERSON & SON
Box 66 Coffee Springs, Ala. U.S.A.

HONEY VALVE

A SPECIAL HONEY VALVE MADE IN OUR MACHINE SHOP THAT IS DRIPLESS AND WHICH HAS A BIG CAPACITY FOR HOT HONEY.

This valve is made of 1" pipe fittings and due to our special design has no packing nut to give you trouble and has ample capacity for all bottling needs and even for 5-gallon cans when the honey is hot. Foot pedal attachment permits operator to handle containers with both hands. All inside parts are brass.

Cat. No. 194 **BRASS SELF CLOSING HONEY VALVE, Ship. Wt. 3 Lbs. (Parcel Post about 50¢)** **$9.00**

Cat. No. 189 **Foot pedal attachment (add 25¢ for postage)** **3.00**

Write for free 64-page catalog.

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